Selected Writings of Edward Burnett Tylor

E. B. Tylor (1832-1917) is considered the Father of cultural anthropology. A Wikipedia entry (Edward Burnett Tylor) describes the life and works of this remarkable man. The articles included in the present selection were published between 1867 and 1905, and reflect the depth and breadth of his interests. Tylor became an inspirational figure to generations of investigators, for his innovative methodology, his direct, shrewd, and honest observations, as well as for his plain style of writing. Compiled by Robert Bedrosian, January, 2018.

Phenomena of the Higher Civilisation Traceable to a Rudimental Origin among Savage Tribes, from *Anthropological Review*, Vol. 5, No. 18/19 (Jul. - Oct., 1867), pp. 303-314, in 13 pdf pages.

Remarks on Japanese Mythology, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 6 (1877), pp. 55-60, in 7 pdf pages.

Review of *The Principles of Sociology* by Herbert Spencer, from *Mind*, Vol. 2, No. 7 (Jul., 1877), pp. 415-429, in 16 pdf pages.

Remarks on the Geographical Distribution of Games, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 9 (1880), pp. 23-30, in 9 pdf pages.

On the Origin of the Plough, and Wheel-Carriage, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 10 (1881), pp. 74-84, in 13 pdf pages.

Notes on the Asiatic Relations of Polynesian Culture, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 11 (1882), pp. 401-405, in 6 pdf pages.

Old Scandinavian Civilisation Among the Modern Esquimaux, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 13 (1884), pp. 348-357, in 12 pdf pages.

On a Method of Investigating the Development of Institutions; Applied to Laws of Marriage and Descent, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 18 (1889), pp. 245-272, in 29 pdf pages.

Notes on the Modern Survival of Ancient Amulets Against the Evil Eye, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 19 (1890), pp. 54-56, in 4 pdf pages.

Remarks on Totemism, with Especial Reference to Some Modern Theories Respecting It, from *Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 28, No. 1/2 (1899), pp. 138-148, in 12 pdf pages.

Obituary article for Professor Adolf Bastian: Born June 26, 1826; Died February 3, 1905, from *Man*, Vol. 5 (1905), pp. 138-143, in 7 pdf pages.

Tylor's foundational major works are available at Internet Archive in various formats:

Researches into the Early History of Mankind and the Development of Civilization (London, 1865; reprinted Boston, 1878).

Primitive Culture (London, 1871), in two volumes: volume 1, *Origins of Culture*. volume 2, *Religion in Primitive Culture*.

Anthropology, an Introduction to the Study of Man and Civilization (London, 1881; reprinted New York, 1899), in 476 pdf pages.

Phenomena of the Higher Civilisation: Traceable to a Rudimental Origin among Savage Tribes
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ture to deny; nevertheless, I shall not attempt to offer any theory respecting the mental or social status of the individual, or of his or her complexion, stature, or probable appearance. In the present state of the case, we have not all the materials before us. I have intentionally refrained from stating all the characters which some of the other remains present, as M. Dupont will adequately describe them elsewhere. At present I shall merely propound the following conclusions, based solely upon the evidence I have laid before you.

1. That the deposit of stratified *limon fluviatile* under stalagmite, in the Trou de la Naulette, was due to the action of slowly operating causes.

2. That the individual whose jaw was found therein was contemporary with the elephant and rhinoceros, whose remains are embedded under like conditions.

3. That some of the characters afforded by the jaw indicate a resemblance to jaws of the Slavonic peoples of Eastern Europe, as especially exemplified by the Masures and Wends.

4. That the above character affords a distinction between the remains found in the Trou de la Naulette and those found in the Trou de Frontal, which contained during the reindeer period individuals strongly resembling the Calmucks of the present day.

5. That some of the characters indicate a strong resemblance to, and exaggeration of, the characters afforded by the melanian races of men, and especially the Australian.

PHENOMENA OF THE HIGHER CIVILISATION

TRACEABLE TO A RUDIMENTAL ORIGIN AMONG SAVAGE TRIBES.

By EDWARD B. TYLOR, Esq., F.A.S.L., F.R.G.S.

MEN have so long felt an interest in the character and habits of their own kind, they have so long practically acknowledged that nothing human is alien to themselves, that we are rich in information as to savages and peoples whose condition lies between that of savages and our own. But the positive value of this information is only now of late years beginning to be apprehended. It is only of late that we have begun to see how much a knowledge of the lower races is capable of giving us besides a mass of entertaining details and quaint stories for our amusement, and beside the means of completing the picture of mankind by taking in both its higher and lower developments. We are beginning to see that over and above all this, the study of the lower races is capable of furnishing most important knowledge about

ourselves, about our own habits, customs, laws, principles, prejudices, —and that this knowledge is, to a great extent, of a kind that we should have found it much more difficult to obtain had there not happened to exist a mass of tribes on the earth at a lower condition of life than ourselves, and records collected in past times of many more such peoples who no longer exist to be studied, for they have been swept off the earth as an incumbrance by other occupiers of the land, or enslaved, or mixed, or civilised out of their earlier and ruder state.

There are few audiences before whom such a subject as this, of the study of the lower races to explain the condition of the higher, can be brought forward with more chance of enticing new workers in this field than a section of the British Association. It is not my purpose to go at length into the details of this study, which would be far too wide a task, nor even to sketch it in outline; but to take a few examples from different departments of the subject, with the view of showing how in one branch of knowledge after another the lower races are capable of showing us in actual existence the state of culture out of which much of our own civilisation has developed itself so far that we live in the midst of it with ideas of its nature widely changed from those of the early time from which we inherited it, or simply with no ideas at all of what it means.

To begin with a branch, which is, perhaps, longest and best known, the stories of uncivilised races about their gods and heroes, cosmogonies, transformations, and origins, show us the mythologic stage which underlies the poetry and religion of the Greeks and other nations, from among whom the highest modern civilisation has grown. This stage is not only represented by its effects as inherited from past times, as it is in Homer. The very savages who live at our own day show us living and walking men whose mythologic thought and life corresponds in a great measure with that of the early myth-makers of our own Aryan race. Sir George Grey's *Polynesian Mythology*, for instance, will set before us the description of the great events of nature with only the thinnest veil of personification, just enough to show how such stories pass more and more into tales of gods and heroes, whose origin and attributes grow more and more indistinct, as one story-teller after another works up with new flourishes and graces the old familiar tales.

We have two primeval ancestors, a father and a mother, says the New Zealand myth. They are rangi and papa, heaven and earth. The earth, out of which all things are produced, is our mother; the protecting and overruling heaven is our father. Once upon a time the heaven was much closer to the earth, and their children took counsel

how to thrust it up. The god and father of cultivated food, Rongo-na-tane, tried to force up the heaven, but he was not strong enough. Then the god and father of uncultivated food, of fish, and of men, tried; but again in vain, till at last there arose Tane-Mahuta, the father of the forest trees. He set his head against his mother, the earth, he raised his feet and pushed against his father, the sky, and strained his back and limbs with mighty effort; and so he rent apart rangi and papa, forcing the earth down from beneath him, while he pushed up the sky above. What can be more transparent than this story, which embodies the insignificance of the little food-plants and the wild vegetables and men; while the forest tree thrusts its head, which is its root, against its mother earth, and pushing with its high trunk, rests its feet, which are its branches, against the clouds, and holds them apart from the earth below. Like so many imagined histories of times long past, the New Zealand mythology is, in great part, really the record of the very events which happen day after day before our eyes in the growing of the forests, the rising and setting of the sun, the battles of the winds and clouds. It goes on through one department of nature after another, telling us, under the same transparent veil of personification, how the god of winds sent his four sons to the four quarters of the world; they are the north, south, east and west winds—how the children of the fish god separated, and some went inland to be the fish of rivers and lakes, and some took up their abode in the ocean, and so forth.

It has been well said, I think, by Grote, that the mythologic history of the Greeks is the history of a past which was never present. But in another sense, much of it, much of the tales of gods and heroes is the history of a past which is ever present, the history of the daily life of nature before our eyes, only put into dim personification and assuming a claim to a historical significance which has only arisen from a profound misunderstanding of its real nature. Now it is a great thing to find the spirit of the mythology to which the world owes so much of its poetry, its philosophy, even of its religion, alive in actual being among us, and ready to be studied. But we shall find that not only the spirit, but the very details of mythology, such as in a different stage have been taken up into the classical stories of Greece, are often to be found among the lower races now, scarcely removed from the original state in which they were first engendered in the mind. The great sun myth, for instance, which recent researches have shown to have had so great an influence in shaping the higher mythologies of India, Greece, and Scandinavia is admirably represented from the contemplation of nature in an early stage of its growth among the Polynesians, and the Indians of North and South America. I will bring for-

ward one case, partly because I believe it to be new, partly because it shows in what minute details modern savage life may illustrate the later grown mythology of ancient Europe.

One of the great events of the voyage of the ship *Argo* was the passage of the Symplegades. There were two rocks which alternately opened and shut with a swift and violent collision, and between them, by the assistance of Athene, who held the rocks asunder for a moment as they shot through, the good ship passed. Now what can have put into the mind of the story-teller this strange idea? That it is not a record of real fact, that it is of no use to look through the maps for the two rocks, which, as the story relates, ceased to open and shut when the *Argo* had passed through, any modern mythologist would acknowledge. But how did the idea of such a thing enter the mind of the myth maker? To call it a quaint poet's fancy is easy but not satisfactory. The more ancient thought and savage thought are studied, the less will students be disposed to take as an explanation of the story the reply that it is a quaint fancy, for the more these things are looked into the more it appears that even the quaintest stories have an origin in something intelligible and definite; that they grew up by processes which are quite intelligible even now. The story of the Symplegades, as it is told in the *Voyage of the Argo*, is a fragment of a myth transplanted with many other wonders into the great Argonautic fable; and if we knew nothing more about it than we learn from its existence there, its meaning and origin would probably have ever remained dark to us. But if we turn to Eastern Asia we shall find the Symplegades no longer an isolated and unintelligible fragment, but a part and feature of the great sun myth. We know, in the first place, that the conception of the night as a huge monster which swallows up the evening sun, is a wide-spread and familiar one. *Evening* in Sanskrit is rajanîmukha, the "mouth of night". What this "mouth of night" which swallows up the sun may be like, with what jaws it is furnished, two Eastern peoples will tell us. Mani is the sun-god of Polynesia—he is among the fullest and most consistent bearers of the sun-myth to be found in the world. Mani is the sun, and the night is his great ancestress, Hine-nui-te, "goddess of the night." Of course she is his ancestress, for the night is the mother or producer of the sun, as well as his destroyer. Mani was told, as he approached the end of his brilliant career, that he would be conquered by his great ancestress Hine-nui-ti-po, whom you may see flashing, and as it were opening and shutting there where the horizon meets the sky. Her teeth are hard and sharp like pieces of obsidian, and her hair like the tangles of long sea-weed, and her mouth is like that of a barracuda. Mani undertook the venture, and, had he succeeded in getting into her

mouth and coming out again, she would have died and he would have lived. But as he went in she awoke and killed him, and then death came into the world, for she is the goddess of death; and had Mani passed safely through her no man would have died.

For a further description of the jaws of night we may go to the Karians of Burmah, who tell us that at the west are two massive strata of rocks continually opening and shutting, and there the sun goes in at sunset. "At the opening and shutting of the western gates of rocks thou goest in between; thou goest below the earth when the sun travels." Perhaps the most striking coincidence between these stories and the Argonautic tale is that in both, the first event is to determine the future course; yet this feature is not servilely copied, but the same idea is worked out in two converse ways. If Mani got through he would come out again at the other side and live, and the jaws of death would no more close on mankind;—if the *Argo* got through the Symplegades, they would remain for ever open for others. The *Argo* passed through, and the rocks stayed fixed open for ever; but Mani was caught, and the reign of the goddess of night and death began.

That fragments of what was once a consistent conception of mythology often survive to be taken up into future stories as mere isolated wonder-tales, is well-known. This history of the Symplegades seems to be such an incident, only explicable when we can find it in its place as a feature of a large and consistent mythological system. Such another case is the story of the great floating tortoise which the sailors mistake for an island, and land upon, and which, irritated by their digging into its back or making fires on it, plunges down into the sea. When we meet with this story isolated as in the Arabian nights, we can only treat it as another quaint fancy of the myth-maker, but an acquaintance with the cosmogony of the lower races explains it and throws it into its place at once. To a modern Polynesian, as to so many ancient races, the world he lives in is a flat plain surmounted by a vaulted roof or heaven. The idea is precisely expressed by comparing it to a dish with a dish-cover placed upon it, and equally well by calling it a tortoise, the flat under shell of which is explained in the Indian books to be the earth, while the arched upper shell is the heaven. And thus we have the wide-spread and ancient myth of the world tortoise which lies floating on the ocean; and thus when we find the idea on a smaller scale reduced to the dimensions of a mere floating tortoise-island, we recognise what was once and is now in other regions a thorough characteristic piece of the cosmogony of the lower races, reduced to a mere tale by story-tellers, whose fancy was taken by an idea the real origin and meaning of which was lost to them.

In using our records of the lower civilisation to explain the pheno-

mena of the higher, there is one plain rule above all things to be observed. When we find an opinion or a practice among the higher races which they can only explain by saying that it is a tradition, a ceremony, or an instinct, but which is not clearly explicable by the circumstances among which it is found; and then, when among a lower race we find the same opinion or practice having an intelligible meaning or a practical purpose belonging to their state of mind, we are justified in thinking that we have traced these things to near their origin. To do this is to look through seeming nonsense till we find a solid basis of sense, and past investigation proves that we may continually succeed in such search.

If we make ourselves familiar with the state of thought among lower races, if we can see with their eyes, and judge by their canons of reasoning, we shall find many things full of sense and purpose to them which it would be far more difficult to explain from the point of view of higher races, among whom similar phenomena are to be found. I will take as instances two of the great religious practices of the world, found in most known times and places—the rites of sacrifice and fasting.

What meaning and intention is applied to these rites in periods of high culture we know perfectly well. They are partly held as ceremonies or ordinances to be practised because enjoined upon men, and partly as producing an effect on the mind of the worshipper who places himself under a discipline of privation or suffering. But if we turn to study the same rites among the lower races, we shall see them in a new light—we shall find them done for what, to the mind of these people, are perfectly direct and matter-of-fact purposes. We shall find a state of thought under which it is as practical and straightforward a thing to burn or bury a sacrificial offering for a spirit, as it is to pay a debt or give a present to a living man, and as practical and significant a proceeding to fast as to eat. A modern European, who holds that he has a soul, but that even his horse or dog has not, must transport himself into an entirely different philosophical atmosphere when he begins to study savages. He will find then that not only men and dogs, and horses and birds, but even trees and corn, fruit, hatchets, and spears and boats have souls. When a man dies, his soul, which is an impalpable, usually invisible something, goes away like his body, somewhere into a future life. Therefore the slaves or wives who have attended him when he was alive, must go and attend him still, and they are, therefore, killed that their souls may follow his soul. And in precisely the same way, and for precisely the same reason, the horse and the dog are killed that their souls may go to serve their master; the corpse, the clothes, the bow and arrow, the pipe and pouch are burnt, buried, or abandoned, with the distinct understanding that

their souls or spirits are to go for the use of the spirits of the deceased. Thus, among the Indians of North America, fishing and boating tribes bury their dead with canoe and paddles ready to launch in the next world; the dead man's soul accompanies the soul of his canoe, with the souls of the paddle and the fishing spear within his grasp. Or if he belongs to a hunting tribe he will have his bow and arrow, his gun, or his horse, ready for his soul to mount in the happy hunting-grounds of the next world. It would be quite tedious to give a detailed account of these funereal rites—the lower races who do not practise them are the exception, not the rule. We find sacrificed for the use of the deceased every part of his possessions, wives, slaves, relatives, horses, house, food, weapons, boats, clothes, ornaments, provisions for the journey, the dog to guide the dead along the difficult road to the other world, the coin to pay the ferry over the gulf which separates this life from the next, or for the toll to pass the heaven-bridge. And there is not the least break in the purpose for which these things are sacrificed—it is not that the wives or slaves are sent to accompany the dead, and the horses, canoes, or weapons destroyed for some other purpose. The philosophy of the lower races is distinct and unbroken throughout; when the slave or the horse, or the bow and arrow are burnt to ascend in smoke to the sky, or buried to rot in the ground, the souls of these things are sent to follow the soul of their possessor. The wife of Eukrates comes back for her slipper. It had been left behind a wardrobe, and thus not burnt with her other things, and so she was in the other world without it. So the ghost of Melissa appeared shivering to her husband, for her clothes had not been burnt for her to wear in the other life. So in the East of our own times the native of the Sulu Archipelago buys for a great price the criminal condemned to death, that he may kill him himself and so secure the service of his soul as a slave to his own in the next existence; and so the soul of the Emperor of Cochin-China is provided with every article of furniture and luxury which belonged to him when alive, and is sent to him by burning it after his death, while supplies of food go on being prepared for him as usual for his spiritual sustenance.

When we find that in parts of South America these practices actually stop the rise of civilisation, because when a man dies everything he has, house, trees, weapons, all must be sent after him, and so accumulation of property is impossible—or when we find it specified among the customs of some North American tribes that the polished stones or bowls used in the national game are the property of the community, and so are exempted from being buried with the dead like other things; we may gain some idea of the strength of this opinion as exemplified in thousands of recorded accounts from early

and late times in most distant portions of the world. The sacrifice to the dead is, indeed, the leading branch of sacrifice among the lower races.

We follow it up into symbolism and ceremony at last, after the manner of rites in general, when they are taken up into the religion of the more advanced races.

We are all familiar with the silvered paper dollars, the paper clothes and presents which the Chinese burn with their dead; and the like transition from practical purpose to fading symbolism is well marked in the offerings to the dead kept up as a mere ceremony at Rome, in the models of toys and ornaments in early Christian graves, and the flowers thrown into graves or hung in garlands above them in our own times.

But sacrifice to other spiritual beings, to elves, wood-spirits, gods inferior or superior, is conducted in the same way and on the same principle as that to the spirits of the dead; though it is, perhaps, oftener found passed into a ceremonial ordinance among the higher races than as a matter of practical purpose among the lower. Yet we shall find no distinct demarcation between the souls of the dead, who are held to become spirits, demons, or gods, and spiritual beings in general; and we may find just the same explanation of the intention of sacrifice laid down with reference to them as to the ghosts. The Chinaman sets out his feast of the dead, waits awhile till the ghosts have eaten their fill of the soul food, and then falls to himself on the corpse. Exactly so the Fijian sets out feasts to satisfy the enormous hunger of his gods; but they are spiritual beings, and what they eat is not the visible substance of the food, but its soul which is capable of separating from it. So a sacrifice of meat and rice is set out by the Rajmahal tribes under a tent, and when the god has had time to eat his fill the worshippers uncover the tent and eat the rest themselves. This is, indeed, a most common practice throughout the world, that when an offering has been made to a god the worshippers themselves may feast on it; and this idea is perfectly reasonable when we understand the theory of souls to which it belongs.

Thus we may see among the lower races that the rite of sacrifice is not the ceremonial observance, or even the act of abnegation, that it is among the higher races who have carried it on into their religious system; but a plain and practical action done to produce what is, to their state of opinion, a plain and practical result—that of giving to the ghosts of the dead, or other spiritual beings the spirits of men animals and things acceptable to them, just as they would give a gift to a living man, or pay tribute to a king.

With the philosophy of these lower races we find associated another

widely spread rite. To the savage philosopher the whole world is swarming with spiritual beings. Every man and animal has a separable soul which can go out and come back—everything has its spirit as well as its body—every tree and river, and star and wind is animated by a presiding spirit, which is not necessarily always resident in it, but comes and goes. These spirits are mostly invisible to him in his waking hours, but in his dreams he can see them far apart from where their material bodies are: either the spirits of men and things come to visit him, or his own spirit goes forth from his body and sees them. He lives among those spiritual beings in a way which only a few modern Europeans can at all realize, he goes to them for information as to what he is to do, and for knowledge as to what has been and is. And especially when he desires to hold intercourse with the spirit world, he has learnt by experience to adopt a practice which infallibly brings him into their presence—he goes for a time without food. In a short time he becomes what we should call "light-headed," and begins to see visions. When he has stayed long enough in this spiritual company, he eats, and returns to the ordinary state of a waking man. I will quote one or two accounts of this proceeding to remove all doubt as to whether this is the real purpose of savage fasting. The following details were taken down by Schoolcraft, perhaps the best authority on the habits and opinions of the North American Indians, from the mouth of an Algonquin chief:—

"Chingwauk began by saying that the ancient Indians made a great merit of fasting. They fasted sometimes six or seven days, till both their bodies and minds became free and light, which prepared them to dream. The object of the ancient seers was to dream of the sun; as it was believed that such a dream would enable them to see everything on the earth. And by fasting long and thinking much on the subject, they generally succeeded. Fasts and dreams were at first attempted at an early age. What a young man sees and experiences during these dreams and fasts, is adopted by him as truth, and it becomes a principle to regulate his future life. He relies for success on these revelations. If he has been much favoured in his fasts, and the people believe that he has the art of looking into futurity, the path is open to the highest honours. The prophet, he continued, begins to try his powers in secret, with only one assistant, whose testimony is necessary should he succeed. As he goes on, he puts down the figures of his dreams or revelations, by symbols on bark, or other material, till a whole winter is sometimes passed in pursuing the subject, and he thus has a record of his principal revelations. If what he predicts is verified, the assistant mentions it, and the record is then appealed to as proof of his prophetic power and skill. Time increases his fame. His Ke-kee-wins, or records, are finally shown to the old people who meet together and consult upon them, for the whole nation believe in these revelations. They in the end give their approval, and declare that he

is gifted as a prophet—is inspired with wisdom, and is fit to lead the opinions of the nation. Such he concluded was the ancient custom, and the celebrated old war-captains rose to their power in this manner."

In many North American tribes every man takes to himself a guardian spirit, generally some animal. And the way he finds out what animal is to be his guardian spirit, his medium, as we often call it, is to fast till it appears to him in vision. In like manner Charlevoix tells us of the practice of making children fast while the fathers are away on hunting expeditions, for they then see in dreams the souls of the animals, and divine what has happened.

In like manner we are told of the Abipones of South America, how their conjurors fast for days till they come into a state in which they seem to see into futurity. To the Hindoo mind nothing is better known than the art of bringing on religious ecstacy and supernatural knowledge, and communication with the higher powers by fasting; and the practice is known as a rite in many higher religions. In Islam, for instance, it is a strongly-marked feature; but the great fast belonged to the time before Mohammed, and was only continued by him.

Nor is the purpose for which it is practised by the North Americans or the Hindoos entirely changed;—its effects in producing mental exaltation and supposed communication with supernatural beings are still to some degree acknowledged, or at least acted upon in Europe. Its great adversary, under whose persistent attacks it is, indeed, losing its influence, is the doctor, whose system teaches him to treat what the American Indian believes to be a state of intercourse with supernatural beings, as a morbid state of mind removable by proper food. In like manner, when he finds a civilized patient seeing visions and holding intercourse with spirits, he prescribes good food and amusement, port wine and tonics. But this new state of opinion does not alter the fact that to mankind in a lower state of culture the practice of fasting is a most intelligible and matter-of-fact proceeding. An Indian goes without food that he may see spirits, with as distinct a purpose as when he eats to satisfy his hunger.

Another of the sets of practices which, prevailing widely in different states of culture, find their ready and direct explanation in the child-like mental state of the savage, is magic. Such of its proceedings as still exist among us are mere remnants of the more serious arts of ancient times, though with, perhaps, a larger proportion of mere knavery. The astrology of Zadkiel's Almanac does not appear to me to differ from the old rules; the ordeal of the key and bible is very old and widely-spread; country people still make a heart and run

pins into it to hurt the heart of some person with whom they choose to associate it, as any savage might do. But in the mind even of the modern savage these things take a different position. To his mind they are perfectly intelligible; they belong to a crude and early system of philosophy, out of which he has not grown. His theory of ideas is something much more and deeper than ours; he has arrived at the knowledge that an idea is something belonging to an object, and thence he reasons, as we have learnt not to do, that what influences the idea in his mind acts in a corresponding way on the object out of it.

If a New Zealand war-party wish to know who of them will fall in battle, they set up a stick for each, and the owner of the stick which falls will fall too. The ordeal of the key and bible is perfectly understood by the lower races, who commonly have some plan of picking out an offender which acts on just the same principle, as, for instance, the suspended sickle of the Khonds of Orissa.

There is in the world a widely spread belief that men with tails exist and are a lower kind of men, and we have an account of a South American tribe, at whose marriages it was customary for the father of bridegroom or bride to chop a piece of wood, by which symbolic proceeding he was snpposed to remove the tails of any grandchildren who might be born. This is just as intelligible a proceeding as the mediæval, or perhaps modern custom of taking a saint down to the water and wetting him, that the ground may in like manner be wetted with abundance of rain. We are apt to call these proceedings by the current name of symbolism, and to think we thereby explain them. But the study of savage tribes teaches us that what we call symbolism and treat as a light half-sincere fancy of the mind, is really part of the opinion of the savage in his most serious moments, and in the midst of his highest flights of philosophy and religion. He has a doctrine of ideas out of which all these magical practices quite consistently arise; and, though we no longer hold this theory, it is, nevertheless, present among us in its effects on our customs and opinions to a degree which only careful and extended study will enable us to realize.

Of one way in which the value of the study of the lower races has been lately turned to account as a means of explaining matters which have usually been treated in that dogmatic *a priori* way which is so intensely unsatisfactory to the modern schools of natural science, I may mention an important instance in Mr. M'Lennan's researches contained in his book on primitive marriage, in which, taking his stand simply on such facts as he could find on record, he has treated the question of the laws of marriage and inheritance as belonging to a connected and consistent development from the conditions of savage to that of civilized life through the different stages of exogamy, or the

law of marriage out of one's tribe; endogamy, or the law of marriage within one's tribe, inheritance and family relationship on the female and on the male side. I do not enter here into Mr. M'Lennan's argument, nor treat it as settling and solving this great problem once for all, but rather call attention to it as a good case, where ground has been broken for the introduction of the scientific method of induction from observed facts into a district lying before almost entirely outside the range of science.

Everyone looks upon things with regard to their bearing on himself or his particular craft. Like the engineer who considered the use of rivers as being to feed navigable canals, I may venture to account teleologically for the existence of savage tribes. Among the uses of savages one great one is, I believe, that of enabling civilized men to understand themselves and their own position in the world, to work out the problem how far their own customs, laws, opinions, prejudices are the result of inheritance, and thus to learn how to separate what is good and valuable in itself from what is only held so because we have carried on the results of early states of culture into our own more advanced age.

Instead of working out in detail any particular department of this course of investigation, I have thought it more profitable to lay before the British Association some samples of its general working and character, trusting to awaken an increased interest in a kind of investigation so important, and so likely to produce immediate fruit, and which, I venture to prophesy, will, before many more years are past, have assumed the position of a great and powerful department of natural science.

ENGLISH SUPERSTITIONS.*

WHAT would our grandfathers have said to a book of this sort being published by the state as a contribution to English history? To men like Warburton, who reviled Tom Hearne for printing our early chronicles and laughed at Bishop Percy because he was the compiler of a song-book, it would have been simply incomprehensible that anyone could derive instruction from a mass of botanical and astrological blundering as scientifically worthless as Sibly's *Astrology* or Culpepper's *Herbal*. The same sort of men laughed at Woodward for being

* *Leechdoms, Wortcunning and Starcraft of Early England.* Edited by the Rev. Oswald Cockayne, M.A. (Master of the Rolls' series.)

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From the IMPERIAL ACADEMY OF SCIENCES, VIENNA.—Sitzungsberichte Philoshistor: Classe 78 Band, Heft 2 and 3; 79 B. H. 1, 2, and 3; 80 B. H. 1, 2, and 3; Math-naturw Classe, 1874; I., II., and III. Abtheil, Nos. 8-10, 1875; I. and II. Abtheil, Nos. 1-5; III. Abtheil, Nos. 1 and 2; Almanach, 1875.

From the SOCIETY.—Proceedings of the Royal Society. Vol. XXIV No. 167.

From the SOCIETY.—Proceedings of the American Philosophical Society. Vol. XIV. No. 95.

From the EDITOR.—Nature (to date).

A collection of Flint Implements and Arrow-heads from Ditchley, Oxfordshire, was exhibited by Captain DILLON.

The following paper was read by the author:

REMARKS *on* JAPANESE MYTHOLOGY. By EDWARD B. TYLOR.

A JAPANESE gentleman, resident in London, Mr. Tatui Baba, has, at my request, translated the opening part of the Ko-zi-ki, an important collection of Japanese annals, so far as I know, not accessible in any European language. The latter part of this work, which constitutes its main contents, is of a historical nature; but the introductory part consists of legends of the Creation and other episodes, in which divinities take part, and it is to these legendary episodes that the following brief remarks relate. I have drawn also from Siebold's "Nippon," and Klaproth's introduction to Titsingh's "Annales des Empereurs du Japon."

It is evident at the first glance over the collected materials of Japanese tradition that the following three principal elements have contributed to them:—

1. The introduction of Buddhism into Japan has caused the reception of a mass of well-known Buddhist legends, which may be here set aside without further notice, the object of the present paper being to bring into view only what is distinctively Japanese.

2. Though the indigenes of Japan were of a race different, physically and philologically, from the Chinese, these latter have migrated into Japan in large numbers within historical times; and in fact Japanese culture is largely of Chinese origin, or developed under Chinese influence. As might be expected, this Chinese influence is well-marked in Japanese mythology. Thus, the legend of the Creation starts with an original chaos, in which the female and male elements, the *me* and *o* (Chinese *yn* and *yang*), were not yet separated; but water, air, and earth were mingled, like the yolk and white of an egg mixed up, till

matter divided itself by the heavy parts sinking to form the earth, while the light parts rose and became the heaven. The Chinese origin of all this is evident: and, again, the Japanese first man, Pan-ko-si, is obviously the Chinese Pwan-ku. These Chinese elements in Japanese tradition may also be set aside.

3. After thus eliminating the two classes of borrowed legends there is left what appears to be a genuine Japanese stratum, containing nature-myths of a very clearly marked character. Thus, in the narrative of the Creation, while the earth is still soft like mud, or like oil floating on the surface of water, there arises out of the mass the flag or rush called *asi* (Erianthus japonicus), from which there springs the Land-forming god (Kuni-soko-tatsino-mikoto). After him arise the god and goddess whose functions are the baking of mud-earth and the baking of sand-earth. As the rush or flag in question grows thickly in marshy places round the Japanese coast, we have here stated in mythological language the geological process of the formation and solidifying of new ground. One of the next proceedings is the production of the islands by the god Iza-na-gi, and the goddess Iza-na-mi, who stand on the heaven-bridge and dip a spear in the muddy waters; the drops from the spear form an island (or several). This is followed by the story of the loves of this divine pair, the male and female spirit, who descend on this island and meet near the imperial column with mutual expressions of admiration. But the goddess, by speaking first, gives an evil presage, and the first child born to them is accordingly set adrift in an ark of reeds. This episode of the setting adrift of a divine or heroic infant, which is found in the traditions of so many races, is noticeable as occurring in Japan.

The Sun-goddess, Ama-terasu-oo-kami, the heaven-enlightening Great Spirit, Ten-shu-dai-sin, is the heroine of several episodes, whose purely nature-descriptive character is evident. She is sent up to heaven to govern all things, and with her is her sister, Tsuki-no-kami, the Moon-goddess. Their brother is a god named Susanno-ono-mikoto, whom, even if the Japanese commentators did not recognise him as the God of Winds, we should see to be such by his description; he is gentle and mild, always with tears in his eyes, but if opposed becomes furious, tearing down everything, uprooting the trees and setting fire to the forests. Therefore his parents order him down to Hades, but he is allowed to visit first his sisters the Sun and Moon in heaven. So he rushes up to the sky, to the terror of the Sun-goddess, Ten-shu-dai-sin. When she sows the earth in spring he scatters and tramples the paths, and at harvest-time he drives

the rain and hail into the fields to destroy the crops. His unruly and offensive conduct at last drives his sister to take refuge in a cavern in the sky; closing the opening with a great stone, she thus leaves the world in darkness. Distressed at this, the 800,000 gods devise means to bring her out; they light a great fire outside, and set a goddess to dance ridiculously, with other joyous proceedings, setting birds to sing, and hanging up jewels, peculiarly cut pieces of paper, and a sacred mirror. The Sun-goddess, wondering that music and dancing should still go on, although she has darkened the world, pushes the great stone a little on one side and peeps out; then the god stationed on guard pushes it on one side and pulls the Sun-goddess out, and they stretch a cord across to prevent her from getting in again. Thus she is appeased, and the Wind-god is sent down below. The scene of the Sun hiding herself is now in the legend transferred to earth, and the very cave is shown; but it is evident that we have really here, in a very clear and perfect form, the nature-myth of the Sun driven into hiding by the storm and peeping out from her cloud-cave, when presently the great cloud is rolled away like a rock from a cave's mouth. Following out the same course of ideas, we read of the Wind-god descending to earth and slaying the eight-headed and eight-tailed serpent, who is about to destroy the "lady of the young rice field." The monster is known to the Japanese as being an eight-mouthed river, so the story seems really that of the wind and the flood.

Beside the main themes of these nature-legends, there occur, here and there, special episodes, and mention of ideas and customs of considerable interest. For example, when the god Iza-na-gi goes down to Hades to visit his wife, Iza-na-mi, to induce her to return to him, she replies, "Alas! thou art too late, I have already eaten the food of this world." We have here the interesting conception (which also occurs with great definiteness in New Zealand) that none can return from Hades who has once eaten of the food of the departed spirits. Again, the mention of the Sun-goddess being enticed out of her cave by the mirror to see herself in, and the pieces of cut paper, belongs to a special characteristic of Japanese worship. We have here evidently the mirror and the cut papers (*go-hei*) with which the Shin-to or Kami temples of Japan are furnished. (Mr. Franks mentions to me the interesting fact that these *go-hei* are used by the Ainos in their festivals, a point which bears on the problem of the relation of the Ainos to the original Japanese.)

It is obvious from the samples I have given that Japanese mythology, when cleared of Buddhist and Chinese elements,

contains nature-legend of value, and also episodes which may help to throw light on other branches of mythology and religion. I have intentionally avoided any full going into the subject, which can only be done by collating the whole set of documents with the aid of native Japanese scholars.

Discussion.

Mr. Tatui Baba—Mr. Chairman and Gentlemen, I am sorry to say that I cannot speak the English language so as to express myself clearly and distinctly. However, being asked so kindly by you, sir, I hope I may be permitted to make a remark or two on the subject. I have to express my best thanks to Mr. E. B. Tylor for bringing this subject before this learned society in a very interesting and able manner. As to the trans'ation which I did, I must say it is a very imperfect one. I had great difficulty in translating that book, not only because I have an insufficient knowledge of the English language, but also because there are some commentators who differ very much as to the meaning of the words mentioned in "Roziki." Besides, the eight-necked serpent called Oroti, and killed by Susanō, is said to be a man who came from the place of that name and not a monster, for that heavenly bridge mentioned in the book is said to be a ship. But I translated it as literally as possible. Till recently there were castes in Japan. They were abolished three years ago; but while they existed the people of the higher caste eat the food cooked in their own fire, because they said they must not "mix fire," and if they did so they would belong to the lower caste. In Japan these castes had nothing to do with religion, and there was no such thing as excommunication. Only if any one did "mix fire" he was looked on as not respectable, and would be disliked but not excommunicated. There are many customs which may be traced in the same way.

Mr. Moncure Conway said—I have been exceedingly interested in the important statements made by Mr. Tylor, and by my friend Mr. Tatui Baba. It has seemed to me in studying Japanese religion that there are various indications of some early intercourse with the Aryan races. It is not only in the resemblance of the idea of the food of the under world preventing, if eaten, the return to life, to the story of Proserpine eating the fatal pomegranate seed that we see this. One of the Vedic descriptions of Brahma speaks of the sun and moon as his two eyes, and there is a very early Japanese myth which relates that the sun and moon were left when a deity bathed his eyes in the primal sea. But I attach still more importance to the fine hero and serpent myth of that country, told of the prince after whom Japan was named. The monster had eight heads instead of the hydra's seven, but in every other respect was a veritable hydra, or water snake. The kami or mirror is mysterious; it is said by Japanese scholars and rationalists to be the symbol of self-examination. Each worshipper on entering the temple immediately repairs to it as his confessional, and after-

wards at once passes for meditation and devotion to the curious pyramid-shaped figure, made of bits of paper. I believe these pieces of paper are diamond-shaped, and I should like very much to hear from Mr. Tylor or Mr. Baba more concerning their significance.

Mr. Lewis said that it was a common belief that anyone visiting the fairies would be unable to return to ordinary human life if he partook of any of the fairy food, which was generally horseflesh or offal, though presenting by enchantment a beautiful appearance. Many details of this kind had been collected by Sir Walter Scott and embodied in the notes to his novels and poems. In "Redgauntlet" he went even nearer to the Japanese notion, as he conducted one of his characters to the lower regions, where he was warned by a deceased friend to "to tak naething frae onybody here, neither meat, drink, or siller, except just the receipt that is your ain." Of course this was a modern tale, but Sir Walter was more likely to have got the notion from a North British than from a Japanese or New Zealand source. In reference to Mr. Charlesworth's remarks, he would say that they must not conclude that because an occurrence was mentioned in a mythical legend no occurrence of the kind could be historical. For instance, Mr. Tylor had found in Japanese mythology an instance of an infant being turned adrift in an ark of reeds; but not to mention Moses, one of the ancient Assyrian kings stated in an inscription that he himself had been so treated. He was not, however, sure that this statement had been accepted by Assyriologists.

Mr. Hyde Clarke said that any similarities between Japanese and other mythologies must be sought, not in a communication in later times to or from Japan, but to the participation in common of prehistoric myths in descent. In the Japanese language there were many words which could be found in Africa, attesting the share of the Japanese in the general inheritance. The origin of mythology was to be found in early language, where several words were appropriated to one idea and several ideas to one word. In time selections took place, and afterwards the original meaning or application of the words was forgotten and new interpretations were placed on them.

Mr. Bouverie Pusey, the President, and others took part in the discussion, and

Mr. Tylor, in reply, said that the episode of the hero being set adrift was by no means necessarily mythic, as the custom of so exposing children was known to many countries. At the same time, from its picturesque character, it is often incorporated in mythic legends. With regard to ideas as to mortals eating the food of the departed souls not being allowed to return, he admitted the similarity of the superstition mentioned as to fairies' food and as to the pomegranate seeds eaten by Proserpine, but considered the New Zealand myth to correspond most exactly to the Japanese

notion. As to the meaning of the mirror in Japanese temples, it was true that the Buddhists considered the sacred mirror to symbolise self-examination, &c., but in Japan there is no doubt that its original meaning was that of an image of the sun, much as a polished gold disc was set up in the ancient Sun temple of Cuzco in Peru.

The following paper was read by the author:

*On the term "*RELIGION*" as used in* ANTHROPOLOGY. By W. L. DISTANT.

IN the interest of anthropology, it will, sooner or later, become necessary to form a synonymic catalogue of anthropological facts; in other words, to discriminate among the many physical and psychical phenomena recorded by actual observers and others as appertaining to primitive and little known races and varieties of mankind. Not but what we must own that the desire for exactitude is in general clear and unmistakable in the descriptions received from different observers of the same people, however divergent as to particular points these statements may be found. It however becomes necessary, before recording a reputed peculiarity either in belief, manners, customs, or physical conformity, over and above such as is vouched for by data, commensurate with the usual requirements of scientific research, to estimate the method of inquiry made, and the qualifications possessed by the observer, to arrive at a successful result. Thus we require to know the opportunity and time available for observation, the method pursued, the tact, experience, and, more particularly, the bias in the mind of the inquiring observer. The reticence of most savages (to use an inappropriate word for want of a better one) to impart information as to their beliefs and customs, and the extreme difficulty of questioning them on the same, either in a manner not calculated to give offence, or sufficiently clear to elicit the truth, often so formidable as to overcome the efforts of a careful and painstaking inquirer; whilst by duplicity, or a misunderstanding of terms completely unreliable or illusory, information is frequently acquired. Thus we have heard of the same people as possessing a religion and as having none whatever, of being addicted to cannibalism and as never practising it, of being ferocious and bloodthirsty and as harmless and friendly, except under provocation. And as anthropology is a popular science, and these statements are quoted by essayists and writers on social and religious subjects, sometimes to prove one thing and sometimes another, the need becomes greater that a careful analysis should be made similar to that selection

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Mr. Tylor's Review of The Principles of Sociology
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he has to understand it, then he feels it because of his cherished affection, and then there is the nervous agitation. Emotion is not as it has often been represented by physiologists a mere nervous reaction from an external stimulus, like the kick which the frog gives when it is kicked. It begins with a mental act and is essentially an operation of the mind.

Each of these four elements has been noticed by different observers. All moralists have talked of the motives by which men are swayed, and attempts have been made by Dugald Stewart and others to classify them. Aristotle remarked Ὀρεκτικὸν οὐκ ἄνευ φαντασίας (*De An.*, III. 10), no appetence without a phantasm; and the Stoics represented passion as consisting in idea, and argued that passion could be subdued by controlling the idea. The excitement with the attachment is the prominent characteristic in the common apprehension and especially among novelists. Physiologists are apt to magnify the organic affection, and may be able to throw more light upon it than they have hitherto done. He who can unfold the whole of these four elements and allot to them their relative place and connection, will clear up a subject which is confusedly apprehended at present, will find a good classification of the emotions and be able to show us what emotion is in itself, and what place it has in the human constitution.

JAMES M'COSH.

IX.—CORRESPONDENCE.

MR. TYLOR'S REVIEW OF *The Principles of Sociology.*

Of the criticisms which Mr. Tylor makes on those chapters of the *Principles of Sociology* reviewed by him in the last number of MIND, I do not propose to say anything, further than to thank him for pointing out some errors of detail which I hope to correct: not, however, so soon as I should like, since the second edition was nearly through the press before his review appeared. But certain of his statements I feel called upon to notice, because of their personal implications.

These implications are contained in the second paragraph of his review, by the following among other passages:—

"As a worker for many years on the ground where Mr. Spencer is now engaged, I am desirous of noticing where he has followed lines already traced. . . . These chapters may, I think, be properly described as a new statement, with important modifications and additions, of the theory of Animism which (to pass over less complete statements in previous years) was given by me in summary in the *Journal of the Ethnological Society* for April 26, 1870,* and was worked out with great fulness of detail in my *Primitive Culture*, published in 1871. . . . How far his conclusions have been arrived at independently of mine I cannot say. . . . In comparing Mr. Spencer's system with my own, I am naturally anxious to see where the later writer differs from the earlier, and where for the better and where for the worse."

* In the last No. of MIND, this date was erroneously given as 1871.

Whether intentionally or not, Mr. Tylor, by these sentences, and especially by the one giving dates, inevitably conveys to his readers two impressions:—first, that I have adopted his views; and, second, that I have done this without acknowledgment. I proceed to show that the first impression is erroneous, and that therefore the second is baseless.

The date of Mr. Tylor's "summary" given above as April 26, 1870, is the date at which it was *read* before the Ethnological Society. At that date there was in print, and four days later there was issued, in the *Fortnightly Review* for May, 1870 (see also *Essays*, Vol. III., pp. 102-4), an essay of mine on "The Origin of Animal-Worship," in which there occur the following passages:—

"The rudimentary form of all religion is the propitiation of dead ancestors, who are supposed to be still existing, and to be capable of working good or evil to their descendants. . . . Everywhere we find expressed or implied the belief that each person is double; and that when he dies, his other self, whether remaining near at hand or gone far away, may return, and continues capable of injuring his enemies and aiding his friends. . . . Here, out of many experiences which conspire to generate this belief, I can but briefly indicate the leading ones:—(1) It is not impossible that his shadow, following him everywhere, and moving as he moves, may have some small share in giving to the savage a vague idea of his duality. It needs but to watch a child's interest in the movements of its shadow, and to remember that at first a shadow cannot be interpreted as a negation of light, but is looked upon as an entity, to perceive that the savage may very possibly consider it as a specific something which forms part of him. (2) A much more decided suggestion of the same kind is likely to result from the reflection of his face and figure in water: imitating him as it does in his form, colours, motions, grimaces. When we remember that not unfrequently a savage objects to have his portrait taken, because he thinks whoever carries away a representation of him carries away some part of his being, we see how probable it is that he thinks his double in the water is a reality in some way belonging to him. (3) Echoes must greatly tend to confirm the idea of duality otherwise arrived at. Incapable as he is of understanding their natural origin, the primitive man necessarily ascribes them to living beings—beings who mock him and elude his search. (4) The suggestions resulting from these and other physical phenomena are, however, secondary in importance. The root of this belief in another self lies in the experience of dreams. The distinction so easily made by us between our life in dreams and our real life, is one which the savage recognises in but a vague way; and he cannot express even that distinction which he perceives. When he awakes, and to those who have seen him lying quietly asleep, describes where he has been, and what he has done, his rude language fails to state the difference between seeing and dreaming that he saw, doing and dreaming that he did. From this inadequacy of his language it not only results that he cannot truly represent this difference to others, but also that he cannot truly represent it to himself. Hence, in the absence of an alternative interpretation, his belief, and that of those to whom he tells his adventures, is that his other self has been away and came back when he awoke. And this belief, which we find among various existing savage tribes, we equally find in the traditions of the early civilised races. (5) The conception of another self capable of going away and returning, receives what to the savage must seem

conclusive verifications from the abnormal suspensions of consciousness, and derangements of consciousness, that occasionally occur in members of his tribe. One who has fainted, and cannot be immediately brought back to himself (note the significance of our own phrases "returning to himself," etc.) as a sleeper can, shows him a state in which the other self has been away for a time beyond recall. Still more is this prolonged absence of the other self shown him in cases of apoplexy, catalepsy, and other forms of suspended animation. Here for hours the other self persists in remaining away, and on returning refuses to say where he has been. Further verification is afforded by every epileptic subject, into whose body, during the absence of the other self, some enemy has entered; for how else does it happen that the other self on returning denies all knowledge of what his body has been doing? And this supposition that the body has been "possessed" by some other being is confirmed by the phenomena of somnambulism and insanity. (6) What, then, is the interpretation inevitably put upon death? The other self has habitually returned after sleep, which simulates death. It has returned, too, after fainting, which simulates death much more. It has even returned after the rigid state of catalepsy, which simulates death very greatly. Will it not return also after this still more prolonged quiescence and rigidity? Clearly it is quite possible—quite probable even. The dead man's other self is gone away for a long time, but it still exists somewhere, far or near, and may at any moment come back to do all he said he would do. Hence the various burial-rites—the placing of weapons and valuables along with the body, the daily bringing of food to it, etc. I hope hereafter to show that, with such knowledge of the facts as he has, this interpretation is the most reasonable the savage can arrive at."

In succeeding pages of the essay I have contended that "out of the desire to propitiate this second personality of a deceased man" there grows up "the worship of animals, plants, and inanimate objects": facts being given in proof that animal-worship is hence derived; that fetishism is hence derived; that nature-worship is hence derived. And after showing how the hypothesis yields interpretations of all orders of superstitions, even to "the worship of compound animals, and of monsters half-man half-brute," I have ended the essay with the following paragraph:—

"These views I hope to develop in the first part of *The Principles of Sociology*. The large mass of evidence which I shall be able to give in support of the hypothesis, joined with the solutions it will be shown to yield of many minor problems which I have passed over, will, I think, then give to it a still greater probability than it seems now to have."

Unquestionably the general theory here sketched, is identical with that contained in those chapters of the *Sociology* reviewed by Mr. Tylor; and as this general theory, with its essential applications, was set forth by me at a date coinciding with that at which his "summary" was read, he causes a misapprehension by saying that "as a worker for many years on the ground where Mr. Spencer is now engaged, I am desirous of noticing where he has followed lines already traced". Should he fall back on his "less complete statements in previous years," then I draw his attention to a statement earlier in date, I think, than any work he has published. On turning

to the *Westminster Review* for April, 1854, pp. 360-1 (see also *Essays*, first series, pp. 114-15, and in the current edition, Vol. I., pp. 66-8) he will find indicated as clearly as the available space allows, the belief that the ghost-theory is the origin of religious ideas and observances; that the savage understands death only as temporary desertion of the body; that he expects the other self to return; that from fears and hopes directed towards this double of the dead man result sacrifices at graves; and that the various evidences "almost unavoidably suggest the conclusion that the aboriginal god is the dead chief: the chief not dead in our sense, but gone away" for a time. On p. 137 of the *Principles of Sociology*, I have referred, in a note, to these preceding brief statements of the conception. Unfortunately, Mr. Tylor appears to have missed this note. Had he read the passages I have quoted and referred to, he would not, I think, have said that the chapters he reviews are "properly described as a new statement, with important modifications and additions, of the theory of Animism which was given by me" [him], &c. His characterisation of these chapters would rather have been:—first, that their essential idea dates back to 1854; second, that in 1870 this idea was set forth in a developed form; third, that in the *Principles of Sociology* I have "followed lines already traced" by myself; and fourth, that I have done this in fulfilment of a promise, made seven years ago, which distinctly refers to the accumulated evidence and the various elaborations now published.

From the question of date I pass to the question of identity. I expected to have in Mr. Tylor an opponent. That I so misunderstood what he asserts to be his view, is, I think, due to the fact that the foreground of his exposition is occupied by another interpretation than that on which he now chiefly insists; and that the first impression produced by it is stronger than subsequent impressions. That part of his *Primitive Culture* which treats of superstitions, begins with three chapters on Mythology; throughout which the teaching appears to be that the personification of inanimate objects and powers is primordial, and quite independent of the ghost-theory. Here are some passages implying this:—

"To the human intellect in its early childlike state may be assigned the origin and first development of the myth." (Vol. I., p. 257, 1st ed.)

"First and foremost among the causes which transfigure into myth the facts of daily experience, is the belief in the animation of all nature, *rising at its highest pitch to personification*. This, no occasional or hypothetical action of the mind, is inextricably bound in with that primitive mental state where man recognises in every detail of his world, the operation of personal life and will. *This doctrine of Animism* will be considered elsewhere as affecting philosophy and religion, but here we have only to do with its bearing on mythology." (*Ib.* p. 258.)

This "idea of pervading life and will in nature far outside modern limits, *a belief in personal souls animating what we call inanimate bodies, a theory of transmigration of souls as well in life as after death*," &c. (*Ib.* p. 260.)

These, and many kindred passages occurring in the chapters on

mythology, left on me the impression that Mr. Tylor ascribes to the aboriginal mind an innate tendency to animistic interpretation, quite apart from those experiences which lead to the notion that each man has a double. Especially did passages such as those I have italicised suggest the belief that, in Mr. Tylor's view, the ascription of souls to objects in general, apart from their appearances as living or dead, is primeval; and that the human soul is but one kind of the souls, independently conceived of as possessed by things in general. And this impression is confirmed by various of his illustrative statements, as when he says :—

"So it is with the stars. Savage mythology contains many a story of them, agreeing through all other difference in attributing to them animate life. They are not merely talked of in fancied personality, but personal action is attributed to them, or they are even declared once to have lived on earth."

A mode of representing the matter, which, joined with the previous generalisation, presupposes the belief that personalisation of these celestial objects had first arisen, and that their identification with human beings took place afterwards. As I have endeavoured to show that there is no primitive animistic tendency at all, and that until the ghost-theory has been developed the personalisation of objects does not take place, I not unnaturally regarded Mr. Tylor as at issue with me "in respect to the order of genesis and mode of dependence of primitive superstitions"; as said in the above-named note on page 137 of the *Principles of Sociology*. In a subsequent chapter of *Primitive Culture*, I find passages which unquestionably represent the ghost-theory as primary; though how Mr. Tylor reconciles them with preceding statements I do not see. But he has so marshalled his facts and arguments as, at any rate, to cause misconceptions in many minds besides my own. I have put the question to six competent readers. One of them thought Mr. Tylor's view was that which he alleges. Two were in doubt as to his belief concerning the origin of Animism. The remaining three were under the impression that he regarded the tendency to think of all objects as containing independent personalities, or souls, as primary and general; and that the conception of a human soul is one of its manifestations.

It is satisfactory now to find that this last is not Mr. Tylor's view; but that, contrariwise, he substantially agrees in regarding the ghost-theory as primary and other forms of superstitions as derived—substantially, I say, for it appears that he does not hold this view in the unqualified form given to it by me.

HERBERT SPENCER.

19th April, 1877.

IN my review of Mr. Spencer's *Principles of Sociology* in last quarter's MIND, I took pains to bring prominently forward whatever opinions in it seemed new and peculiar. He now raises the question whether I was right in considering him to have partly "followed lines already traced". In noticing how remarkably a great part of

his views correspond with the system of Animism previously laid out by me, I was comparing his volume (published in 1876) with my *Primitive Culture* (published in 1871), or, what is practically the same thing, with the summary of the chapters on Animism belonging to it which (they had been in MS. since 1869) I read as a paper at the Ethnological Society on April 26, 1870. Mr. Spencer objects to this on the ground that he had already written an outline of his views in an essay on "The Origin of Animal-Worship," which had not indeed been published when my paper was read, but was in type, and came out in the *Fortnightly Review*, for May, 1870.

Though this preliminary outline of Mr. Spencer's does not take in all the points of his later completed system, it will serve for comparison. Accordingly, as he reprints its most important passages above, I now copy some of these in order as they come, and place beside them extracts from two lectures delivered by me at the Royal Institution in 1867 and 1869.

"It is not impossible that his shadow, following him everywhere, and moving as he moves, may have some small share in giving to the savage a vague idea of his duality." "A much more decided suggestion of the same kind is likely to result from the reflection of his face and figure in water, imitating him as it does in his form, colours, motions, grimaces."

"The root of this belief in another self lies in the experience of dreams. The distinction so easily made by us between our life in dreams and our real life, is one which the savage recognises in but a vague way; and he cannot express even that distinction which he perceives. When he awakes, and to those who have seen him lying quietly asleep, describes where he has been, and what he has done, his rude language fails to state the difference between seeing and dreaming that he saw, doing and dreaming that he did. . . . . Hence, in the absence of an alternative interpretation, his belief, and that of those to whom he tells his adventures, is that his other self has been away and came back when he awoke."

"The conception of another self capable of going away and returning receives what to the savage must seem conclusive verifications

"The [savage] notion of the ghost runs almost inextricably into that of the spirit or soul, of the breath and the blood, and of those unsubstantial somethings which follow the man and are like him, his shadow and his reflection in the water."—(Tylor, 1867.)

"Now Animism in the lower civilisation is not only a religion, but also a philosophy; it has to furnish rational explanations of one phenomenon after another, which we treat as belonging to biology or physics. If a man is alive and moving, the animistic explanation is that his soul, a thin, ethereal not immaterial being in the man's likeness, is within him, animating him, just as one gets inside a coat and moves it. If the man sleeps and dreams, then either the soul has gone out of him to see sights that he will remember when he wakes, or it is lying quiet in his body, receiving visits from the spirits of other people, dead or alive—visits which we call dreams. If the man when fasting or sick sees a vision, this is a ghost or some other spirit; if he faints or falls into a fit, his soul has gone out of him for a time, and must be recalled with mystic ceremonies;

from the abnormal suspensions of consciousness, and derangements of consciousness, that occasionally occur in members of his tribe. One who has fainted, and cannot be immediately brought back to himself (note the significance of our own phrases 'returning to himself,' etc.), as a sleeper can, shows him a state in which the other self has been away for a time beyond recall. Still more is this prolonged absence of the other self shown him in cases of apoplexy, catalepsy, and other forms of suspended animation. . . . Further verification is afforded by every epileptic subject, into whose body, during the absence of the other self, some enemy has entered. . . . And this supposition that the body has been 'possessed' by some other being is confirmed by the phenomena of somnambulism and insanity."—(Spencer, 1870.)

if it returns, he recovers, but if it stays away permanently, then the man is dead. If the man takes a fever or goes mad, then it is a spirit which is hovering about the patient, shaking and maltreating him, or it has got inside him, and is driving him, tearing him, speaking and crying by his voice. . . . This early animistic doctrine is to a great degree superseded by science, which sees in dreams and visions, not objective spiritual visits, but subjective phenomena of the mind, and regards the afflicted cataleptic no longer as doctor, but as patient."—(Tylor, 1869.)

In quoting passages, I might have even gone back to the Introduction to my *Early History of Mankind* (1865), but these seem enough to confirm what I said as to Mr. Spencer, in some measure, following lines already traced. In arranging the above passages side by side, their similarity indeed is seen to be so close that one can hardly imagine their originating independently. Here are seven leading points of a somewhat complex theory, all contained in a few lines of my lectures, and all coming together in Mr. Spencer's single note. But on looking more closely, the order of the topics proves to be a yet more curious piece of internal evidence. In my passages they come in succession thus—Shadow, Reflexion, Dreams, Fainting, Fits, Madness, and Possession. This succession is partly accidental, the first two points being from one lecture and the last five from another. But on examining Mr. Spencer's passages, it will be seen not only that my succession reappears, but that what was accidental with me has even become part of his systematic order—Shadow, Reflexion, Dreams, Fainting, Fits, Possession, and Madness. The transposition of the two last is accounted for by both being combined in one sentence of mine, which might be broken either way. Here, I think, is circumstantial evidence enough to justify an inference somewhat thus—Mr. Spencer, having read my lectures, may have taken short notes, and afterwards expanded these in his essay with matter of his own interspersed, eventually forgetting about it so perfectly that he is now bringing forward against me my own ideas as proofs that they are not mine. By doing this, however, he led me to perform the converse process to his, by cutting out from his passages what was not mine, and behold, there were my seven little propositions come back to me as they

went. Such internal evidence hardly needs a further clue, but one may be found. Mr. Spencer's essay is a review of Mr. M'Lennan's papers on "The Worship of Animals and Plants," also in the *Fortnightly Review*, October and November, 1869. Mr. Spencer therefore had under his eyes the place (p. 423) where Mr. M'Lennan, writing of primitive Fetishism and Animism, appends the following note :—"Two papers having a bearing on this matter, written by Mr. E. B. Tylor, the one on 'The Early Mental Condition of Man,' and the other on 'Traces of Savage Thought in Modern Civilisation,' both read before the Royal Institution, London, are well worthy of being consulted". These are the two lectures above quoted.

This inference seems not weakened but strengthened by examination of Mr. Spencer's earliest article, that on "Manners and Fashion" in the *Westminster Review* of 1854, with which he proposes to meet any publication of mine previous to 1870. In this essay will be found some of his views which have since remained most characteristic. I certainly have no conflict with Mr. Spencer for possession of the theory that ancestor-worship is the primitive religion ("the aboriginal god is the dead chief"), a doctrine much like that taught by no less a philosopher than Euhemerus in the 4th century, B.C. For my own part, I look on this theory as only partly true, and venture to consider Mr. Spencer's attempt to carry it through unreservedly as one of the least satisfactory parts of his system. In Mr. Spencer's 1854 essay is also stated the difference of the savage idea of death from ours, and the notion of the dead being gone to some other land whence he will return, this leading to funeral offerings of food, weapons, &c. But I must take exception to the way in which Mr. Spencer, in his present letter, reads back his later animistic ideas into the contents of this early essay, of which the fundamental principle is Comte's fetishism. I look there in vain for any explicit statement indicating the ghost-theory as the origin of religious ideas, or for anything about the "other self" or "double" of the dead man. Indeed, I ask any one interested in the present discussion to take Vols. I. and III. of Mr. Spencer's *Essays*, to compare the early article on "Manners and Fashion" with the late article on "Animal-Worship," and to say whether I am not right in considering one of the most striking features of the essay of 1854 to be the absence of the animistic ideas which have become so prominent in the essay of 1870. I have already given my opinion as to the likeliest way of accounting for this change of views.

It had not crossed my mind that Mr. Spencer's article of May 1870, would be used as a means of claiming priority, till I saw the note at p. 137 of his *Principles of Sociology*, which he supposes I may have missed. I had not missed it, and indeed wrote a few days ago to the *Academy* to call attention to its wording, which is not unlikely to lead readers to think that after Mr. Spencer had published his outline, I took up the subject and published "views in some respects like" his. I have asked him to prevent this misapprehension by giving his readers some intimation of the actual state of the case.

I need hardly say much on Mr. Spencer's concluding paragraphs as to his having misunderstood the similarity between his own views and mine as to the whole animistic doctrine being ultimately derived from the conception of the human soul. He now admits that he finds "passages which unquestionably represent the ghost-theory as primary". Considering that the opinion in question is prominent even in the chapter-headings and index of *Primitive Culture*, of which Mr. Spencer was not a mere casual reader, but was using it in the composition of his *Principles of Sociology*, I really think he should have been aware that I held such a view.

EDWARD B. TYLOR.

May 28, 1877.

MUCH space and time would have been saved had Mr. Tylor, in his review of my book, given the places and dates of the "less complete statements [of his views] in previous years," which he refers to (MIND, p. 142). My statement given above, was written before his correction of his erroneous date, 1871. As my own paper on Animal-worship was published in 1870, and as I was ignorant of the when and the where of his previous writings, such references as I made were exclusively to *Primitive Culture*. After Mr. Tylor's rectification of date (in the *Academy*), I altered the date in my proof, and referred to his paper in the *Ethnological Transactions;* finding in it a much greater kinship of view respecting the part played by the ghost-theory, than his *Primitive Culture* led me to suppose. As, however, his paper was, as shown above, simultaneous with my own, it did not require me to make any essential alterations in my statement; and I awaited his rejoinder with perfect calmness.

Being thus unprepared for the evidence Mr. Tylor has now given, I confess that it startled me; and I was above all startled on learning that in Mr. McLennan's papers in the *Fortnightly*, which led me to publish the essay on Animal-worship, there were references to those lectures of Mr. Tylor from which he now gives extracts, but of which I knew nothing. The shock was an extremely unpleasant one; for, invalid though I knew Mr. Tylor's inference to be, I did not at first sight see how I was to show its invalidity. I think, however, I shall be able to do this.

Let me first remark that, having a case which he doubtless thinks very strong, Mr. Tylor might fitly have refrained from certain acts which, to say the least, are questionable. Twice he has laid before the readers of the *Academy* parts of his case, though the counter case was not before them, nor was about to be placed before them, but was, as distinctly stated by me, to be given here. Further, Mr. Tylor, both in his review and in one of his letters to the *Academy*, has overstated the facts. He has spoken of his views as given "in summary in the *Journal of the Ethnological Society* for April 26th"; whereas April 26 was the date at which his paper was read, and publication of it in the *Journal* did not take place till some months later.

And then, in his second letter to the *Academy* he has spoken of his paper as being *before* mine on Animal-worship, in such way as to imply that it was accessible to me; whereas mine was in *print* at the time when his was *read.*

I now proceed to show that this overstraining of the evidence gives much of its seeming strength to Mr. Tylor's statement above. Let me take first what appears its strongest point—the correspondence between the orders of the causes assigned for the origin of the ghost-theory. These causes as given by Mr. Tylor are, by his own showing, taken from separate lectures; and he makes out his series by putting together two sets of causes assigned at an interval of two years. Further, to produce the correspondence, he suppresses two of the factors contained in my series but not in his, besides modifying the expression of others; and he suppresses from his own series two factors, of which one is not in mine, and the other is differently placed in mine. Observe how the two groups stand when taken literally from the above-quoted passages

SPENCER.	TYLOR.		
Shadows.	Shadows.		Lecture of 1867
Reflexions.	Reflexions.		
Echoes.			
Dreams.	Dreams.		Lecture of 1869
Fainting.	Fainting.		
Apoplexy.			
Catalepsy.	Fits.		
Epilepsy (Possession).	Death.		
Somnambulism.	*Fever.*	Possession.	
	[*i.e.* delirium]		
Insanity.	Madness.		
Death.			

That Mr. Tylor has shown skill of manipulation in bringing complete likeness out of lists so considerably unlike, must be admitted; but it seems to me that in thus modifying them he was impolitic. He might have been sure I should re-state the facts as they stand. Moreover, he might have been content with the degree of correspondence which actually exists; and might still have alleged the unlikelihood that my list was drawn up without any knowledge of his; for in the absence of explanation the agreement is sufficiently remarkable. There is an explanation, however, if not of the agreement, yet of the particular order adopted by me. That order is the one which I have everywhere followed in treating the phenomena of evolution—the order from the simple to the complex, from the inorganic to the organic, from the general to the special. If Mr. Tylor will turn to *First Principles,* Part II., and glance at chapters viii., ix., x., and at a further group of nine chapters, xiv. to xxii., he will find that in every case the evidences from the inorganic are placed before those from the organic, and that in each of these divisions the sub-groups progress from the simple and general to the complex and special. Or if, again,

he will turn to the *Classification of the Sciences*, he will find an exactly parallel order adopted. Now in the above list I have placed first the inorganic phenomena suggesting duality—shadows, reflexions, echoes; of which the shadows are the most general and simple, reflexions less general and simple, and echoes the most special. In the remainder of the phenomena, which are organic, come first the most general, dreams; then the less general, faintings; then the still less general, fits of various kinds, and the comparatively unusual somnambulism and insanity: death coming at the end, not as being less general or more complex than some of the preceding ones, but because it is to be interpreted by all the preceding. So that I could not have chosen any other order without abandoning my habitual mode of classification. To which explanation of this order, let me add that were it true, as Mr. Tylor suggests, that I adopted my interpretation from him, it is scarcely likely that I should have left undisguised such parallelism as exists.

Beyond that internal evidence of independent origin yielded by the inclusion of two causes of the ghost-theory not assigned by Mr. Tylor, and the omission of one named by him, let me point to other internal evidence of considerable significance. I have in several cases assigned reasons why the savage forms the conclusion he does, which Mr. Tylor has not assigned: instance the savage's belief that a portrait carries away part of his being, as illustrating his belief that a reflexion is a part of his being; instance the inadequacy of his language to represent the difference between dream-experiences and real experiences. But not dwelling further on these internal evidences, I pass to the external evidences that these factors of the ghost-theory were not adopted from Mr. Tylor. In § 56 of the *Principles of Sociology* there is proof that in 1858-9, the phenomena of shadows, as giving the idea of duality, were remarked upon by me in connection with Williams's work on Fiji, in which he describes the Fijians as believing that both shadows and reflexions are souls (p. 241); and if Mr. Tylor questions the validity of this proof, because it is a statement contained in a recent work, then I refer him to *First Principles*, § 2 (which § 2 formed part of a No. issued in October, 1860), where he will find some words quoted from page 30 of that book by Williams, showing it had then been read by me. Here, then, are the first three factors—shadows, reflexions, and echoes (not named by Mr Tylor) for which I am clearly not indebted to him. With respect to the remaining factors, I have first to point out that the supposed desertion of the body by the soul in fainting is also referred to as a Fijian belief in Williams's book (p. 242), making four out of Mr. Tylor's seven that were known to me before he wrote. And then, observing that in this same book are illustrated the primitive notions that the spirits of dead, and even of living, men can trouble people in their sleep (pp. 241-2), and that a priest when supposed to be "possessed" looks like "a furious madman," I ask whether it was unlikely that among the factors of the ghost-theory I should name suspended animation of other kinds than syncope, as well as the several forms of deranged consciousness.

But now I go on to assign the chief sources from which my views above given were derived. In the preface to the *Descriptive Sociology*, Mr. Tylor will find it stated that in October 1867, Mr. David Duncan (now professor in Madras) commenced under my superintendence the compilation of those divisions of it dealing with the uncivilised races. When he left me, in March 1870, there were completed tables and classified extracts of the "Types of Lowest Races," "Negrito Races," "Malayo-Polynesian Races," and "African Races": in all, thirty savage and semi-civilised peoples. If Mr. Tylor will turn to the two parts of the *Descriptive Sociology* containing these tables and extracts, which were in manuscript at the time when I wrote the paper on Animal-worship, and if he will read down the column of superstitions in each table, and look at the correlative extracts, he will see that I had before me an amount of evidence forming an amply sufficient ground for the views respecting the ghost-theory set forth in that essay, without any need for referring to lectures given, or papers written, by others. He will see, for instance, that there are named three races who hold that the soul deserts the body in sleep, and that dreams are its adventures, and nine races who believe the spirits and ghosts of dead relatives seen in dreams, to be real; so that the opinion expressed by me in the above-quoted passage, that "the root of this belief in another self lies in the experience of dreams," was neither adopted at second-hand nor without good warrant. And, further, he will see that, as abstracted in these columns, the facts tell their own tale so completely, that there needs but little inductive faculty to draw the inevitable inferences. To complete the proof, it remains now only to quote a statement from Mr. Tylor's review. He says:

> "In its main principles, the theory requires no great stretch of scientific imagination to arrive at it, inasmuch as it is plainly suggested by the savages themselves in their own accounts of their own religious beliefs. It is not too much to say that, given an unprejudiced student with the means (only of late years available) of making a thorough survey of the evidence, it is three to one that the scheme of the development of religious doctrine and worship he draws up will be an Animistic scheme."

Thus it appears that though the view held by Mr. Tylor, with which he identifies mine, "is plainly suggested by the savages themselves in their own accounts of their own religious beliefs"; and though I had before me an immense accumulation of such accounts deliberately prepared for generalisation; Mr. Tylor thinks I must have had recourse to his lectures for my conclusions. He says, it is three to one that this doctrine will be arrived at by "an unprejudiced student" "making a thorough survey of the evidence"; and yet though I was in possession of abundant evidence from many parts of the world, classified and abstracted as no student of such evidence ever had it before, Mr. Tylor takes the one chance against the three, and prefers to think that I did not draw the inferences myself, but plagiarised upon him. Not only does he ascribe to me this dishonesty, but he ascribes to me an almost incredible stupidity; since he thinks that, having deliberately appro-

priated his conclusions without acknowledgment, I challenged his implied belief of my indebtedness, knowing (according to his view of my act) that I was calling forth the evidence which would justify that belief. In the face of clear proof that primitive ideas had been a matter of study with me as early as 1854, and that, continuing my inquiries at intervals, I commenced in 1867 a systematic compilation and classification of them, which in 1870 had become very extensive; Mr. Tylor alleges against me a great unscrupulousness and a folly equally great, rather than allow to me an insight comparable to his own.*

The paragraph of Mr. Tylor's above reply in which he comments on the views I expressed in 1854, is, in one sense, very satisfactory to me. It asks readers interested in the question to compare those views with my later ones, for the purpose of verifying Mr. Tylor's characterisation; and the comparison will, I venture to think, prove to them the extreme bias of his judgment. He says that the conception in the essay of '54, has Comte's fetishism for its fundamental principle (what he means by Comte's fetishism as distinguished from any other, I do not know); and that it contains no "explicit statement indicating the ghost-theory". I first remind Mr. Tylor that the two pages containing that conception seem, even as it is, somewhat out of place in the essay on "Manners and Fashion," though needful to its argument; and that I was obviously debarred from a fuller statement. Doubtless at that time I held the current belief respecting fetishism (as acknowledged in the paper on Animal-worship, where I definitely repudiate that belief). But the fetishism believed by me in 1854 to be a primitive mode of thought, and in 1870 rejected by me as not primitive, is exactly that which Mr. Tylor calls "Animism"—the mode of thought under which "surrounding objects and agents are regarded as having powers more or less definitely personal in their natures". (*Essays*, Vol. III., p. 112.) Further, I have to point out that in the essay of 1854, it co-exists with the rudiments of that ghost-theory which in 1870 has wholly expelled it. Mr. Tylor sees no recognition of the primitive belief in a double, but only a recognition of fetishism, in the facts I have cited to show that death is at first understood as a state from which

* When Mr. Tylor has solved these incongruities, there will remain for him another, to which I draw his attention. In a note to *First Principles*, § 58 (recent editions), he will find an acknowledgment of a verbal suggestion received. In a note to § 82 of the same work, he will find a volunteered statement that a friend had reached a view like that there set forth, though he had not published it. In the *Principles of Psychology*, § 307, he will find reference to an idea expressed to me in conversation which had possibly influenced my course of thought. In the *Classification of the Sciences*, first edition, Table I., he will find another acknowledgment of a verbal suggestion; and in the second volume of the *Essays*, p. 244, he will find yet another. And once more in the *Principles of Biology*, § 373, there is a distinct repudiation of a degree of credit for originality which might else have been ascribed to me. With these six cases of acknowledgments made where no evidence could be produced of the need for them, I invite Mr. Tylor to reconcile his supposition that I appropriated without acknowledgment ideas already in print.

there will be revival. When I cite the notion of the Fijians that an enemy has to be killed twice, so implying a duplicate, and when I refer to pagans who attribute to the soul the same shape and substance as the body, Mr. Tylor sees in this only fetishism, and thinks it implies no perception on my part that the savage believes in a second self of the dead man. When, in further explanation of this primitive doctrine, I refer to the food, &c., left with the corpse, to the conception of another world to which men travel after death, and to the idea that the dead chief will come back from this other world, Mr. Tylor sees in this only fetishism, and no approach to the ghost-theory. Nor when, in further proof, I refer to past and present races, among whom "every family has its guardian spirit," "one of their departed relatives," can Mr. Tylor see any implied assertion that savages believe that dead men have doubles: he sees only a delineation of fetishism.

And now let us mark what, twelve years later, Mr. Tylor sets forth as that "Animism" which he identifies with the ghost-theory, and which he thinks I have adopted from him. From the earliest paper he names in the *Academy* as containing his views, published in the *Fortnightly* for August, 1866, here is a sentence which, after a preliminary paragraph, sets forth the doctrine he is about to describe as "Animism"—"the old and simple theory which explains the world at large as directly animated by a life like our own" (p. 72); and then, further on, it is re-stated as—"a theory of animation which accounts for each phenomenon of nature, by giving it everywhere a life like our own" (p. 83). This, then, in Mr. Tylor's view, is not Fetishism but Animism—this it is which he identifies with the ghost-theory as held by me; and from expositions of his, pervaded by this conception of primitive beliefs, he says my conception of primitive beliefs has been derived. On the whole, I think, on comparing the two, the interested reader invoked by Mr. Tylor, will see in my essay of '54 a subordinate fetishism and a dominant ghost-theory, and in Mr. Tylor's essay of '66 a subordinate ghost-theory and a dominant fetishism.

That the foregoing proposition could be more conclusively established I did not suspect when writing it. After writing it, however, I obtained from the Royal Institution copies of those lectures of Mr. Tylor from which he quotes above, for the purpose of seeing what accompanying statements they contained. In the lecture of 1867, I soon came upon passages which astonished me not a little. He says—"The worship of such spirits [in natural objects at large], found among the lower races over almost the whole world, is commonly known as 'fetishism'. It is clear that this childlike theory of the animation of all nature lies at the root of what we call Mythology." Here the two conceptions which Mr. Tylor now distinguishes, are identified by description. But this is not all. The next sentence runs thus:—"It would probably add to the clearness of our conception of the state of mind which thus sees in all nature the action of animated life and the presence of innumerable spiritual beings, if we give it the name of Animism instead of Fetishism." Here the two conceptions, now placed by Mr. Tylor in antithesis, are identified by name.

The facts in brief, then, are these. My statement of 1854, joining with implied acceptance of the current view about fetishism, distinct rudiments of the ghost-theory, Mr. Tylor characterises as only Fetishism, in contra-distinction to that Animism which he now identifies with the ghost-theory; and he alleges that I have derived this contra-distinguished conception of Animism from lectures in which he identifies Fetishism with Animism both by description and by name! Nor is this all. While in my essay of 1870, I repudiated the theory of Fetishism entirely, and alleged the adequacy of the ghost-theory to explain all the facts, Mr. Tylor, in his *Primitive Culture*, issued in 1871, continued to make Fetishism *alias* Animism the basis of Mythology, just as he alleged it to be in the passage above quoted. The reader may now judge what truth there is in Mr. Tylor's supposition that I have "followed lines already traced" by him.

2nd June, 1877. HERBERT SPENCER.

Want of space prevents my re-discussing fetishism, animism, and other matters. But I must notice that Mr. Spencer has shifted his ground. In his first letter he met my claim by referring me to an essay written by him in 1854, whereas in his second letter he brings forward books years later in date as sources of his ideas. And was it unreasonable in me to suppose that he might have used publications of mine? When I compare the dissertation on the souls of lifeless things at pp. 193-5 of his *Principles of Sociology* with the treatment of the same subject five years earlier in my *Primitive Culture*, Vol. I. (1st ed.) pp. 430-8, 452; (2nd ed.) pp. 477-85, 500, and notice how not only the set of principal evidence, but two of the main inferences, and even the term "object-souls" (a word of my own making, I believe) reappear in Mr. Spencer's pages without any remark as to all this having been said before by me, I think there was no unlikeliness in my supposition that much the same might have happened in 1870. As Mr. Spencer now says that he knew nothing of my lectures, I of course accept this against circumstantial coincidences however extraordinary. I am glad to hear that Mr. Spencer is issuing a note to clear up that at p. 137 of his work. Had he looked at my early papers, of which he had a list before him in the preface to my book, this unpleasant controversy might not have arisen.

EDWARD B. TYLOR.

June 13.

P.S.—If I remember Mr. Spencer's letter rightly, he proves that the order of the topics in his essay must have been his own, being a necessary consequence of his system. This argument does not seem strengthened by noticing (as I have just done) that in the book in which his system is now worked out, the succession is *not the same*, Death being actually placed *before* Madness and Possession. E.B.T.

June 19.

Remarks on the Geographical Distribution of Games.
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MARCH 11TH, 1879.

E. B. TYLOR, Esq., F.R.S., *President, in the Chair.*

The minutes of the previous meeting were read and confirmed.

The following presents were announced, and thanks were ordered to be returned to the respective donors for the same:—

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From the SOCIETY.—Proceedings of the Royal Geographical Society, Vol. I, No. 3.
From the ASSOCIATION.—Proceedings of the Geologists' Association, Vol. V, Nos. 7 and 8.
From the AUTHOR.—"Turtle-back" Celts in the Districts of Columbia. By Dr. W. J. Hoffman.
From the EDITOR.—Revue Scientifique, Nos. 35 and 36, 1879.
From the EDITOR.—"Nature" (to date).

The President read the following paper.

REMARKS *on the* GEOGRAPHICAL DISTRIBUTION *of* GAMES.

By EDWARD B. TYLOR, Esq., F.R.S., President.

IN a paper read last year on the Asiatic origin of the game of patolli, played among the Aztecs before the Spanish Conquest (*see* "Journal of the Anthropological Institute," November, 1878), I pointed out that the occurrence in Mexico of this game, closely allied to the Hindu pachisi, added a new proof to those long since brought forward by Humboldt, of the old Mexican civilisation having been more or less derived from Asia. In preparing a lecture on the History of Games,* I have since come upon other facts as to the geographical distribution of games, which seem to open a new line of argument as to the spread of civilisation from South-East Asia over the vast Malayo-Polynesian district as far as New Zealand, in times of some antiquity, at any rate long before the South Sea Islands became known to Europeans.

Before entering on this special argument, as games have

* Delivered at the Royal Institution, March 14, 1879; *see* "Fortnightly Review," May, 1879.

hitherto been scarcely used for the anthropological evidence they afford, it may be well to give a clear idea of the working of such a line of proof. Of course no stress can be safely laid on the appearance in different districts of games likely to arise independently, as of those which are child's play imitating serious arts like archery or building huts, or those which might naturally suggest themselves again and again, such as wrestling, or catching balls thrown from one to another. The games which have a value as proofs of connection or intercourse between the districts they are found in, must be peculiar or complex enough to bar the supposition of their having sprung up independently. On close examination, the number of radically distinct games known among mankind proves to be much smaller than might have been expected. Their examination may be much simplified by arranging in groups those which appear to be variants of one game, like the backgammon-group, described in the paper in this Journal just referred to, or the chess group, or the polo-hockey group. Between these groups again, deeper-lying connections may be made out, as where it appears that the backgammon-group is related on the one hand to all games of dice or lots, and on the other hand to the family of draught-games, in which pieces or men are moved or drawn (whence the name *draughts*) by rule on a diagram or board. It is clear that new varieties of games grow up freely from the older forms. But also it appears that when a game is once worked into perfect fitness for its place in the life of boys or men, it may last on with remarkable permanence, as when we see represented in the ancient Egyptian tombs the counting game well known to us by its Italian name *morra*, as well as the childish sport called in English "hot-cockles," where the blind-man on all fours has to guess which of the others struck him on the back. These simple amusements have held their own from thus early in the historical period, through changes which have superseded languages, dynasties, and religions. Thus, there is always a fair chance of finding in existence in modern times any of the popular games of the ancients. I have lately found that the classic Greek and Latin game of draughts, the principle of which was that of taking a man by getting him between two enemies (*see* Pollux, Onomasticon, ix, 98; Ovid. Ars Amat. iii, 358, Trist. ii, 478), has not disappeared from the world. It is still in vogue in Egypt, much as it may have come with Alexander to Alexandria, and is known elsewhere in places where the Arabs have carried it (Lane, "Modern Egyptians," vol. ii, p. 59; Burton "First Footsteps in East Africa," p. 41). This ancient classic game, which may be conveniently called by the term *latrunculi*, seems distantly related to the Chinese

wei-chi, or game of circumvention, in which the principle is to take a man by surrounding him with four enemies. It may be here pointed out, for a reason which will be seen presently, that the game we now call draughts is quite different from these ancient games. It seems to be a modern and simplified form of chess, in which the pieces are all pawns, becoming queens when they reach the enemy's line, while their mode of taking by jumping over is that of the older game of fox-and-geese.

Let us proceed to examine the history and geography of the sport of kite-flying. Though now so thoroughly naturalized in Europe, it seems not to have been known beyond three centuries, but to have come over within that time from Asia, where it has long been popular as a sport of men as well as children. European travellers in China are amused to see grown-up people walking out in the evening, string in hand, leading their kites about like pet animals, and in some parts one day in the year (the 9th of the 9th month) has been given up from ancient times to a great kite-flying festival on the hills, when the sky is full of paper birds and monsters. The Chinese skill in kite-making may be judged of, by trying the similar Japanese bird-kites, now to be bought for a few pence in London shops. The kite-flying in India, Siam, and the Malay region has been often described, and among the peculiar forms may be mentioned musical kites, lantern kites, and kites arranged to be fought by making them cut one another's strings. Somewhere in South-Eastern Asia, we may assume as the geographical centre from which the toy spread. Now it appears that before the European exploring voyages during the past century, the sport of kite-flying was already known over Polynesia, even down to New Zealand. The Rev. W. W. Gill in his "Myths and Songs from the South Pacific," p. 122, figures the Hervey Island kites of reed with bunches of leaves and feathers on the tails. They were, he says, egg-shaped, club-shaped, or bird-shaped, and as the latter were more difficult to make, they were scarce, and greatly admired by the childish old men who delighted to fly them on the hill-tops of Mangaia. The native myth was that in the shades below, the god Tane once challenged the god Rongo to a game of kite-flying, but Rongo, who had secretly provided himself with an enormous quantity of string, won the match. From this first kite-flying, mortals learnt the pastime, and the rule is that in each game the first kite that mounts the sky is sacred to Rongo and bears his name. The Society Islanders made their kites of native cloth (Ellis, "Polynesian Researches," vol. i, p. 228). The New Zealand kites of sedge and flax leaves have often been described, and a very artistic one is figured by the Rev. R. Taylor in his "New Zealand,"

p. 346; it is in bird-form and called *kahu* or hawk, from its hovering, as we call ours a kite. It is a recognised sign of peace when kites are seen flying near a village (Dieffenbach, "Travels in New Zealand," vol. ii, p. 31). We may fairly suppose that the sport had found its way from the Malay corner of Asia; and its wide diffusion among the islands, with the habit of singing mythical chants during the flying, seem to point to some considerable antiquity. It is worth notice that the Fijians, who are not mainly Polynesian either in race or language, seem to have been out of the line of intercourse. Dr. Seemann ("Viti," p. 45) says they had heard of kites by their Polynesian name of *manumanu*, or bird, but had never seen one.

Next, as to a game which we consider still more childish. Mr. A. R. Wallace ("Malay Archipelago," p. 88) being one wet day in a Dyak house in Borneo, to amuse the lads took a piece of string and showed them "cat's cradle," when to his surprise he found that they knew more about it than he did, a native boy taking it off his hand and making several new figures which quite puzzled him. In New Guinea the Motu, who are Polynesians, are also proficients at cat's cradle ("Journal of the Anthropological Institute," vol. vii. p. 483), and the position which the little art holds in New Zealand is most remarkable. The Maoris make the string into many more patterns than one, these representing to them canoes, houses, &c., and in this way they commemorate scenes in their mythology, such as Hine-nui-te-po, the goddess Night, bringing forth her progeny, and Maui fishing up the North Island from the bottom of the sea. It is said that Maui, the national hero-deity, invented cat's cradle, which is called *maui* after him (Taylor, pp. 130, 347; Dieffenbach, vol. ii, p. 32). Among the Australians Eyre ("Central Australia," vol. ii, p. 229) remarks, "string puzzles are another species of amusement with them. In these a European would be surprised to see the ingenuity they display, and the varied and singular figures which they produce. Our juvenile attempts in this way are very meagre and uninteresting compared to them." Now as to the origin of the string games among these Malays (Dayaks) and Polynesians, it is evident that they did not learn them from Europeans. And though cat's cradle is now known over all Western Europe, I find no record of it at all ancient in our part of the world. It is known in South-East Asia, and the most plausible explanation seems to be that this is its centre of origin, whence it migrated westward into Europe, and eastward and southward through Polynesia and into Australia.

It further appears from the account of Captain Cook's "Third

Voyage," vol. iii, p. 144, that the Sandwich Islanders had a game like (English) draughts, but more intricate, to judge from the number of squares; the board was 2 feet long, divided into 238 squares 14 in a row, *i.e.*, 14 × 17, and it was played by moving black and white pebbles from square to square. Unfortunately, the explorers did not spend an hour in learning the game, nor did Ellis the missionary ("Polynesian Researches," vol. iv, p. 213) though he gives its name *konane*, and remarks that it is a favourite amusement with the old men, and that he has known a game begun early in the morning and hardly finished in the day. The game still exists, as is shown by a passage in Mrs. Brassey's "Voyage of the 'Sunbeam,'" chap. 16, so that by next year it may be possible to get a set of rules sent over. My own impression is that the Hawaiian game will prove to be related to the already mentioned Chinese game of circumvention. But it is to the present purpose to point out that, not being European draughts, it is almost certainly one of the Asiatic games, and had found its way from Asia before the time of the European explorers. The Maoris are now addicted to English draughts, which they play with great skill, but there is reason to believe that they had a native game of their own; the native term is *e'mu* (*see* Dieffenbach, vol. ii, p. 58; Shortland, "Traditions of New Zealanders," p. 158). It is worth while to give this evidence in an incomplete state, as it may call the attention of anthropologists in Polynesia to the desirableness of looking for traces of Asiatic draught games as likely to afford interesting clues to the sources of South Sea Island culture.

Whether these games were carried from Asia over the Pacific by a drift of population or a drift of civilisation, that is, if either the Polynesians themselves brought them on their migration from the Malay region, or they were conveyed by mariners in later times, when the South Sea Islands were already colonized by the present Polynesians, on either supposition it would be likely that other distinctly Asiatic ideas would have travelled over by the same routes. In fact, we may look to tracing more or less of the Polynesian culture to ideas borrowed from Asia. I will give an example of this, which has for years seemed to me of much ethnological interest. The Asiatic conception of the earth being arched over by a number of concentric heavens is found in Polynesian mythology. Now the mere idea of a flat circular earth domed over by the sky is one which arises naturally from the evidence of the senses, so that its being found as it is in all regions of the world proves nothing as to intercourse between their inhabitants. But the doctrine of successive heavenly spheres or strata is not thus suggested by the appearance of the sky, nor would it be likely even to occur to the mind of a savage

or barbarian. It was a scientific hypothesis of the ancient astronomers to account for the independent motions of the sun, moon, and five other planets, by considering them as carried round each on a transparent crystal sphere. Not to go here into the question of the connection of this theory with the early Chaldean system as seen in their seven planetary temple stages, the doctrine of the heaven-spheres comes very distinctly into view in the Pythagorean scheme of seven crystal spheres of the planets, through which we see to the eighth and outermost dark sphere carrying the fixed stars. The Sabeans reckoned nine spheres and a sphere of spheres, ten altogether. For an early stage of astronomy this theory of concentric planetary spheres is thoroughly rational, but when it passed into the speculations of astrology, and became popularised among nations ignorant of its scientific meaning, it seems to have sunk into mere mythic cosmology. Thus, when in our own time and country we hear people talk of being in the seventh heaven, without having the least idea of the original real meaning of the phrase, we may understand how the seven heavens and seven hells, and other conceptions of the same class, found their way into the religions of Asia. For my present purpose it is enough to mention that the broken-down Hinduism of the Indian Archipelago recognises both the seven heavens which are the abodes of the gods, in the highest of which dwells Diebata (Sanskrit *Devata*) and the seven hells (*sapta patala*). This seems to indicate the line along which the idea of successive domes or storeys of heaven and the underworld may have reached the Polynesians. The best account of them is given by Gill (pp. 2, 21, 153), whose drawings show ten overarching domes of blue stone, corresponding with the lands in the nether world, the innermost circle being that of the sun and moon, which come up and go down through openings, so that the sun may be up above while the moon is in the world below, and *vice versa*. In the Society Islands, Ellis (vol. iii., p. 169) describes the nine heavens or strata of clouds or light inhabited by the different orders of inferior deities, the tenth being the heaven of utter darkness, inhabited by the highest gods. Elsewhere the number of these heavens is reckoned to be seven (Waitz "Anthropologie der Naturvölker," vol. vi. p. 299). In New Zealand (Taylor, p. 114) there are ten heavens, the lowest separated from the earth by a solid transparent substance of ice or crystal, along the under side of which glide the sun and moon, while above this firmament are the reservoir of the rain, the abode of wind, of spirits, and of light, the highest and most glorious of all being the habitation of Rehua. It seems quite unlikely that such notions of successive vaults or storeys above and below the earth should have sprung up as

spontaneous fancies among the Polynesians, whereas they are quite explicable as borrowed from Asia, where ignorant priests had degraded them from astronomy to introduce them into religion. The way in which this evidence of the transmission of mythology fits with that from the transmission of games, strengthens both as proofs of the drifting of Asiatic culture into Polynesia.

Discussion.

Mr. Hyde Clarke observed that he accepted the paper of the President as a most valuable contribution to the knowledge of the epoch of proto-historic culture. He had himself been making further investigations on that subject, beyond those he had communicated to the Institute. That the illustrations of the President should be common to the Old and New World was a necessary consequence of the facts. In language a great Turano-African class must be constituted, including of dead languages the Iberian of Spain, the Etruscan, Prisco-Latin, &c., of Italy, the pre-Hellenic, Dacian, Thracian, Phrygian, Lydian, Carian, Canaanite, languages of Caucasia, Akkad of Babylonian, Paleo-Indian, Egyptian; and of modern languages Basque, Ugro-Altaic, Georgian, Ude, Kolarian, Naga, and many others of India, Japanese, &c., Coptic, many African languages; the Pomo (mound-builders) and others of North America, Mexico and Peru. The mythology and culture were common to the whole class, and are not Aryan, but the Aryan mythology was based on the Turano-African. As facts were built up by such researches as those of the President, we should obtain a clearer view of the proto-historic epoch, and thereby of the prehistoric and of the historic.

Mr. Moncure Conway said he wished to mention, with regard to what the President had said concerning the highly artificial kite-flying of the East, that a similar elaboration appears among the Chinese of California in the matter of card-playing. The oldest American gamblers do not appear to be so devoted to the game, and it is a stipulation in contracts for service made with Chinese in San Francisco that they shall pass every evening at their card-house; any remonstrance is as vain as against a religious custom. He wished also to remark that Professor Lesley, of the University of Pennsylvania, in his work, "Man's Origin and Destiny," published by Trübner, advanced the curious theory that the game of hop-scotch is a survival from an ancient representation of initiation. The diagram would be the ground plan of the temple, and the shell is carried from point to point up to the holy of holies.

Lieut.-Col. H. Godwin Austen: With regard to the toy models of horses made at Troy and alluded to by the last speaker, I may mention that similar toys are sold in every bazaar in India, generally made of burnt clay and painted white, and represent a horse in a curious stiff attitude, with the legs stuck straight out in front and behind. There are two other games, I may mention,

which I have noticed in India. 1st, Polo at one time was a favourite general game throughout Persia and India, but curious to say, it is now confined to only two spots wide apart; Baltistan, on the Indus, in the north-west and Munipur on the south-east, eastward of the Brahmaputra. But it was curious to find that this game, no longer played on horseback, is still retained and played like our hockey, on foot in Kistwar, a district south-east of Kashmir, where the villages turn out and play, one against the other, on a certain day of the week.* 2nd, In the Naga hills I was much struck by finding that the children played with a peg-top, spun with a string, made out of a very hard kind of wood pointed below, and one of these I still possess, I obtained at the Lahupa village of Shipvomeh.

Mr. HILTON PRICE mentioned the great antiquity of the various games of ball, and the fact that balls covered with leather, cut into four and eight pieces, sewed together with string, have been found in Egypt. Ancient Egyptians playing at ball are depicted upon the monuments of Beni-Hassan.

MARCH 25TH, 1879.

E. BURNETT TYLOR, Esq., F.R.S., *President, in the Chair.*

The minutes of the previous meeting were read and confirmed.

The following presents were announced, and thanks were ordered to be returned to the respective donors for the same :—

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From the SOCIETY.—Transactions of the Anthropological Society of Russia, Vol. XXI.

From the EDITOR.—Archiv für Anthropologie, Jan., 1879.

From the INSTITUTION.—61st Annual Report of the Royal Institution of Cornwall, 1878.

* Polo was first revived in India, in the district of Cachar, which lies west of Munipur, and where many people from that valley are settled, the tea-planters taking it up and playing with them; thence it spread to Dacca and to Calcutta, where it is played several evenings in the week on the Maidan. It was then taken up by officers of cavalry and other regiments in India, and has thus reached this country.

On the Origin of the Plough, and Wheel-Carriage.
Author(s): E. B. Tylor
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liv. 1; Tom. XXXV, pt. 1, liv. 2; Tom. XXXV, pt. 2, liv. 1-6; Tom. XXXVI, liv. 1, 2; Tom. XXXVIII, liv. 1.

From Professor AGASSIZ.—Bulletin of the Museum of Comparative Zoology, Harvard College, Vol. VI, Nos. 1 and 2.

From the INSTITUTION.—Journal of the Royal United Service Institution, Vol. XXIII, No. 103.

From the EDITOR.—Revue Internationale des Sciences, No. 2, 1879.

From the COLLEGE.—List of the Fellows, &c., of the Royal College of Physicians, 1880.

From the SOCIETY.—Proceedings of the Royal Society, No. 200.

From the SOCIETY.—Transactions of the Geological Society of Glasgow, Vol. VI, pt. 1.

From the SOCIETY.—Proceedings of the Asiatic Society of Bengal, No. IX, 1879.

From the SOCIETY.—Journal and Proceedings of the Royal Society of New South Wales, 1878.

JOHN HALL GLADSTONE, Esq., F.R.S., was elected a member of the Institute.

Dr. DALLY exhibited a collection of Ethnological objects from British Columbia.

The following paper was read by the Author:—

On the ORIGIN *of the* PLOUGH, *and* WHEEL-CARRIAGE.

By E. B. TYLOR, Esq., F.R.S., President.

THOUGH much has been written on that great engine of civilisation, the plough, yet the whole line of evidence as to its development from the simplest and earliest agricultural implements seems never to have been put together, so that I venture to lay before the Anthropological Institute the present notes.

Not only the beginning of agriculture, but the invention of the plough itself, are pre-historic. The plough was known to the ancient Egyptians and Babylonians, and the very existence of these nations points to previous thousands of years of agricultural life, which alone could have produced such dense, settled, and civilised populations. It was with a sense of what the plough had done for them, that the old Egyptians ascribed its invention to Osiris, and the Vedic bards said the Açvins taught its use to Manu, the first man. Many nations have glorified the plough in legend and religion, perhaps never more poetically than where the Hindus celebrate *Sîtâ*, the spouse of Râma, rising brown and beauteous, crowned with corn-ears, from

the ploughed field; she is herself the furrow (*sîtâ*) personified. Between man's first rude husbandry, and this advanced state of tillage, lies the long interval which must be filled in by other than historical evidence. What has first to be looked for is hardly the actual invention of planting, which might seem obvious even to rude tribes who never practise it. Every savage is a practical botanist skilled in the localities and seasons of all useful plants, so that he can scarcely be ignorant that seeds or roots, if put into proper places in the ground, will grow. When low tribes are found not tilling the soil but living on wild food, as apparently all mankind once did, the reason of the absence of agriculture would seem to be not mere ignorance, but insecurity, roving life, unsuitable climate, want of proper plants, and in regions where wild fruits are plentiful, sheer idleness and carelessness. On looking into the condition of any known savage tribes, Australians, Andamaners, Botocudos, Fuegians, Esquimaux, there is always one or more of these reasons to account for want of tillage. The turning-point in the history of agriculture seems to be not the first thought of planting, but the practical beginning by a tribe settled in one spot to assist nature by planting a patch of ground round their huts. Not even a new implement is needed. Wandering tribes already carry a stick for digging roots and unearthing burrowing animals, such as the *katta* of the Australians, with its point hardened in the fire (Fig. 1), or the double-ended stick which Dobrizhoffer ("Abipones," part ii, chap. 13) mentions as carried by the Abipone women to dig up eatable roots, knock down fruits or dry branches for fuel, and even, if need were, break an enemy's head with. The stick which dug up wild roots passes to the kindred use of planting, and may be reckoned as the primitive agricultural implement. It is interesting to notice how the Hottentots in their husbandry break up the ground with the same stone-weighted stick they use so skilfully in root-digging or unearthing animals. (J. G. Wood, "Natural History of Man," vol. i, p. 254). The simple pointed stake is often mentioned as the implement of barbaric husbandry, as when the Kurubars of South India are described as with a sharp stick digging up spots of ground in the skirts of the forest, and sowing them with ragy (Buchanan, "Journey through Mysore, etc.," in Pinkerton, vol. viii, p. 707); or where it is mentioned that the Bodo and Dhimal of North-East India, while working the ground with iron bills and hoes, use a 4-ft. two-pointed wooden staff for a dibble (B. H. Hodgson, "Aborigines of India," p. 181). The spade, which is hardly to be reckoned among primitive agricultural implements, may be considered as improved from the digging-stick by giving it a flat paddle-like

end, or arming it with a broad pointed metal blade, and afterwards providing a foot-step (*see* the Roman spade in Smith's "Dictionary of Greek and Roman Antiquities," s.v. "pala.") In the Hebrides is to be seen a curious implement called *caschrom*, a kind of heavy bent spade with an iron-shod point, which has been set down as a sort of original plough (Rau, "Geschichte des Pflugs," p. 16; Macculloch, "Western Islands," Pl. 30); but its action is that of a spade, and it seems out of the line of development of the plough. To trace this, we have to pass from the digging-stick to the hoe.

All implements of the nature of hoes seem derived from the pick or axe. Thus the New Caledonians are said to use their wooden picks both as a weapon and for tilling the ground. (Klemm, "Culturwissenschaft," part ii, p. 78). The *tima* or Maori hoe (Fig. 2), from R. Taylor's, "New Zealand and its Inhabitants," p. 423, is a remarkable curved wooden implement in one piece. It is curious that of all this class of agricultural implements, the rudest should make its appearance in Europe. Tradition in South Sweden points to waste pieces of once tilled land in the forests and wilds, as having been the fields of the old "hackers," and within a generation there was still to be seen in use on forest farms the "hack" itself (Fig. 3), made of a stake of spruce-fir, with at the lower end a stout projecting branch cut short and pointed (Hyltén-Cavallius, "Wärend och Wirdarne," part ii, p. 110; i, p. 43). Even among native tribes of America a more artificial hoe than this was found in use. Thus the hoe used by the North American women in preparing the soil for planting maize after the old stalks had been burnt is described as a bent piece of wood, three fingers wide, fixed to a long handle. (*See* Charlevoix, "Nouvelle France," Letter 23; Lafitau, "Mœurs des Sauvages Ameriquains," vol. ii, p. 76, and Plate 7). (I do not venture to copy the hoe shown in this plate: a mere fancy picture.) In other North American tribes, the women hoed with a shoulderblade of an elk or buffalo, or a piece of the shell of a tortoise fixed to a straight handle. (*See* Loskiel, "Mission of the United Brethren in North America," p. 66; Catlin, "American Indians," vol. i, p. 121). From this stage we come up to implements with metal blades, such as the Kafir axe, which by turning the blade in the handle becomes an implement for hoeing (Lane Fox, "Lectures on Primitive Warfare," No. 2, p. 10). The heavy-bladed Indian hoe (Sanskrit *kuddâla*) called *kodâly* in Malabar (Klemm, "Culturwissenschaft," part ii, p. 123), which is shown here (Fig. 4), is one example of the iron-bladed hoe, of clumsy and ancient type. The modern varieties of the hoe need no detailed description here.

FIG. 1.

FIG. 2.

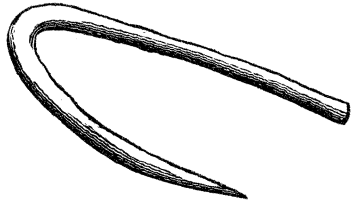


FIG. 3.

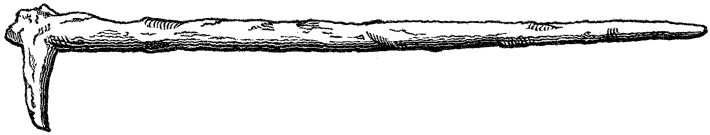


FIG. 4.

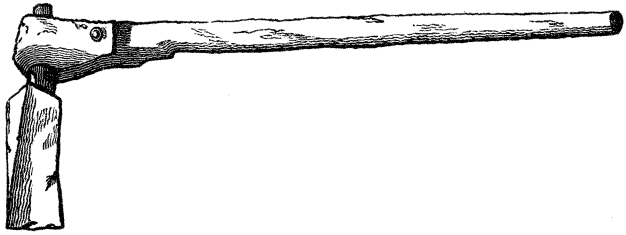
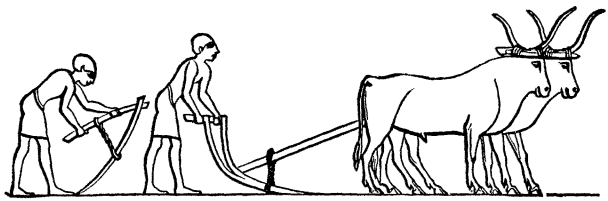


Fig. 1, Australian "Katta." Fig. 2, "Tima," or Maori Hoe.
Fig. 3, Swedish "Hack." Fig. 4, Indian Hoe.

That the primitive plough was a hoe dragged through the ground to form a continuous furrow, is seen from the very structure of early ploughs, and was accepted as obvious by Ginzrot ("Wagen und Fahrwerke der Griechen und Römer," vol. i, and Klemm, "Culturwissenschaft," part ii, p. 78). The evidence of the transitions through which agricultural implements have passed in Sweden during the last ten centuries or so, which was unknown to these writers, is strongly confirmatory of the same view. It appears that the fir-tree hack (Fig. 3) was followed by a heavier wooden implement of similar shape, which was dragged by hand, making small furrows; this "furrow-crook" is still used for sowing. Afterwards was introduced the "plough-crook," made in two pieces, the share with the handle, and the pole for drawing. The share was afterwards shod with a three-cornered iron bill, but the implement was long drawn by hand, till eventually it came to be drawn by mares or cows. (Hyltén-Cavallius, part ii, p. 111.) Thus in comparatively modern times a transformation took place in Sweden remarkably resembling that of which we have circumstantial evidence as having happened in ancient Egypt. The Egyptian monuments show a plough, which was practically a great hoe, being dragged by a rope by men. (*See* Denon, "Antiquités de l'Egypte," vol. i, Pl. 68.) Still more perfect is the ploughing scene here copied in Fig. 5. (*See* Rosellini, "Monu-

Fig. 5.



menti dell' Egitto, Pl. 32-3; Wilkinson, "Ancient Egyptians," chap. 6.) Here the man who follows the plough to break up the clods is working with the ordinary Egyptian hoe, remarkable for its curved wooden blade longer than the handle, and prevented from coming abroad by the cord attaching the blade to the handle half-way down. This peculiar implement, with its cord to hold it together, reappears on a larger scale in the plough itself, where the straight stick is lengthened to form the pole by which the oxen draw it, and a pair of handles are added by which the ploughman keeps down and guides the plough.

The Valley of the Nile, where the lightness and richness of the alluvial soil is favoured by the inundations with their fresh deposit of river mud, was no doubt one of the regions where the higher agriculture earliest arose, and looking at this sketch of hoeing and ploughing, we might be tempted to think that here the transition from the barbaric hoe to the civilised plough is to be seen as it first took place in the world. Egypt may possibly have been the birthplace of the plough, but so many forms of rude ploughs are to be found represented on coins and sculptures of the ancient world, that it is safer to be content with the general idea that they are enlarged and transformed hoes, without attempting to fix the date, place, and nation, to which this inventive transformation belongs. The following figures are selected from those copied by Ginzrot and Rau. The old Syracusan form (Fig. 6), as likewise some old Etruscan patterns, are remarkable as being so close to the original hoe-pattern as not to have the tail or handle. This want is supplied in other rude forms of ancient Italy, of which Fig. 7 shows one. A more angular Roman form is thought to represent the ceremonial plough, with which the wall-line was traced in founding a new city, and Fig. 8 is another archaic form; the projection of the pole behind was for the ploughman's foot to press the share down.

FIG. 6.

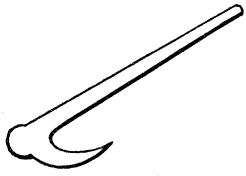


FIG. 7.

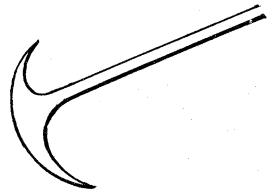
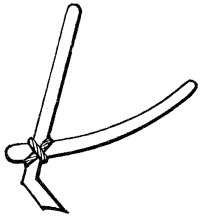


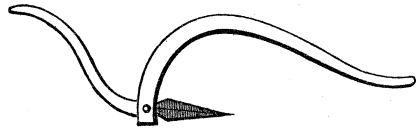
FIG. 8.



Depresso incipiat jam tum mihi taurus aratro
Ingemere, et sulco attritus splendescere vomer.
(Virg. Georg. I, 45.)

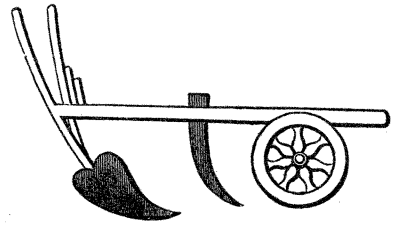
Fig. 9 is Greek, from an early MS. of Hesiod's "Works and Days." Looking at forms of plough as rude as these to be seen at this day in Asia and in backward countries of Europe, one wonders to find that already in classic ages the husbandman had ploughs of construction far more nearly approaching that of our best modern implement-makers. Pliny (xviii, c. 48), after describing the simpler kinds of plough, mentions that in Rhœtia, a plough with the addition of two

FIG. 9.



small wheels had been recently invented, and was used for land already under tillage. He also mentions the coulter (*culter*). This knife, fixed in front to make the first cut ready for the share to turn the sod, is a great improvement on the primitive ploughs, where the ploughshare has to do the whole work. In Pliny's time, though only forming part of some ploughs, it was evidently well-known. Thus he recognises the whole construction of the wheel-plough (Fig. 10) as figured by Caylus from an ancient gem. The ordinary modern plough used by the English farmer improves upon this rather in details of construction and material than in essential principle, though a new start in invention is taken by the self-acting plough which no longer needs the ploughman to follow at the plough-tail, and by the steam-plough which substitutes engine-traction.

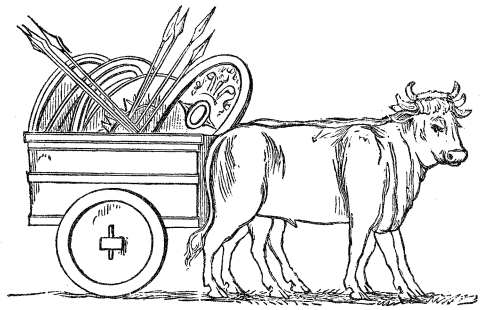
FIG. 10.



The plough, drawn by oxen or horses, and provided with wheels, has taken on itself the accessories of a wheel-carriage. But when the plough is traced back to its earliest form of a hoe dragged by men, its nature has little in common with that of the vehicle. Though the origin of the wheel-carriage is even more totally lost in pre-historic antiquity than that of the plough, there seems nothing to object to the ordinary theoretical explanation (*see* Reuleaux, "Kinematics of Machinery," and others), that the first vehicle was a sledge dragged along the ground, that when heavy masses had to be moved, rollers were put under the sledge, and that these rollers passed into wheels forming part of the carriage itself. The steps of such a transition, with one notable exception which will be noticed, are to be actually found. The sledge was known in ancient Egypt (*see* the well-known painting from El Bersheh of a colossal statue being dragged by men with ropes on a sledge along a greased way, Wilkinson, "Ancient Egyptians," vol. iii.) On mountain-roads, as in Switzerland, as well as on the snow in winter, the sledge remains an important practical vehicle. The use of rollers under the sledge was also familiar to the ancients (*see* the equally well-known Assyrian sculpture of the moving of the winged bull, in Layard's "Nineveh and Babylon," p. 110.) If now the middle part of the trunk of a tree used as a roller were cut down to a mere axle, the two ends remaining as solid drums, and stops were fixed under the sledge to prevent the axle from running away, the result would be the rudest imaginable cart. I am not aware that this can be traced any-

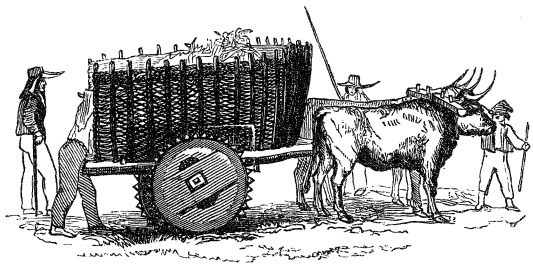
where in actual existence, either in ancient or modern times; if found, it would be of much interest as vouching for this particular stage of invention of the wheel-carriage. But the stage which would be theoretically the next improvement, is to be traced in practical use; this is to saw two broad drums off a tree-trunk, and connect them by a stout bar through their

FIG. 11.



centres, pinned fast, so that the whole turns as a single roller. The solid drum-wheel was used in the farm-carts of classic times (*see* the article "Plaustrum," by Yates, in Smith's "Dictionary of Greek and Roman Antiquities"). The ox-wagon here shown is taken from the Antonine column (Fig. 11); it appears to have solid wheels, and the square end of the axle proves that it and its drum-wheels turned round together in one. A further improvement was to make the wheel with several pieces nailed together, which would be less liable to split. The ancient Roman farm-carts were mostly made with such wheels, as are their successors which are used to this day with wonderfully little change, as in Greece and Portugal. The bullock-cart of the Azores (Fig. 12) (from Bullar, "Winter in the Azores," vol. i.,

FIG. 12.



p. 121) is a striking relic from the classic world; its wheels are studded with huge iron nails by way of tire. From old times it was common to make wooden rings, sockets, or bearings underneath the cart for the axle to turn in, much as children's toy-carts are made, as has often been remarked. But a drawing of a modern bullock-cart taken near Lisbon, represents only a pair of pieces of wood acting as stops, so that the body of the cart can be lifted off its wheels. In looking at these clumsy vehicles we certainly seem to have primitive forms before us. There is, however, the counter-argument which ought not to be overlooked, and which in some measure accounts for the lasting-on of these rude carts, namely, that for heavy carting across rough ground they are convenient, as well as cheap and easily repaired. Considering that the railway-carriage builder gives up the coach-wheel principle, and returns to the primitive construction of the pair of wheels fixed to the axle turning in bearings, we see that our ordinary carriage-wheels turning independently on their axles are best suited to comparatively narrow wheels, and to smooth ground or made roads. Here they give greater lightness and speed, and especially have the advantage of easily changing direction and turning, which in the old block-wheel cart can only be done by gradually slewing round in a wide circuit.

As early as history goes back, the carriage-builder had already begun to make spoked-wheels with metal tires, whose well-made nave turned smoothly on the axle. It is needless here to extract from Wilkinson and Layard particulars of the beautifully-made Egyptian and Assyrian chariots, nor to go into details of classic, mediæval, and modern carriage-building. As bearing on the origin of the art, it must be noticed that the point where the developments of the plough and carriage join, is in the way of attaching the drawing oxen or horses, which was much alike in both. The pole and yoke was no doubt the original mode of draught, not only for the plough and the heavy ox-cart, where it may be often seen still, but also for the chariot and light car. (*See* "Schlieben, Die Pferde des Alterthums," p. 154.) The war-chariot, with its yoked steeds, has a remarkable similarity wherever we meet with it in the ancient world, which seems to point to its invention by some one particular nation, though which has not yet been made out, whence it spread to distant countries. How such inventions found their way is well shown in a point of detail, which incidentally shows how far the ancient Britons were from the uncivilised state popularly attributed to them, namely, their use (Mela iii, 6) of scythe-chariots, such as were used in Oriental armies, like that of Darius (Diod. Sic. xvii, 53), or of Antiochus Eupator, when

he came into Judea with horsemen and elephants, and 300 scythe-chariots (2 Maccab. xiii, 2). War-chariots were from the first drawn by the pole. The Homeric chariots appear to have been without traces, as where in the Iliad (vi, 40), Adrastus' scared horses snap the pole amid the tangled tamarisk, and set off straight for the city, evidently having nothing but the pole to hold them. In ancient Egypt, one inner trace was used, but the stress was on the pole. Eventually, in looking at the harness of various nations, we come to the present plan of draught by collar and traces. The change is interesting, as seeming to prove that the earliest use of draught-cattle is that still seen in the yoke of oxen. It has been argued by Pictet ("Origines Indo-Européennes, part ii, p. 94)), that the yoke, Sanskrit *yuga*=that which *joins*, was first invented for the pair of oxen to draw the plough with, it being likely that they were first put to this heavy work, and afterwards used for drawing carts, rather than that the idea of drawing a cart by oxen should have occurred before putting them to plough. This, though not absolutely certain, seems a very reasonable argument, while the yoke and pole being so much better suited to the ox than to the horse, points to oxen as the earliest draught-beasts. The history of successive changes seems well shown in the Latin *jumentum*, a beast of burden, from *jugumentum* = yoke-ment, which word keeps up the memory of the original yoke, though other modes of transporting burdens had come in. The Latin *jumentum* is used for the horse, etc., but not for the ox, and French *jument* has still further lost the old idea, now meaning merely a mare. One further remark is suggested by the harness of the ancient Egyptian chariot, where the yoke is provided with two saddles coming down on the withers of the horses. As is well known, cavalry was by no means general among the armies of the ancient world. The early Aryans, like the Homeric heroes, were charioteers, not horsemen, nor are there any ancient Egyptian horsemen to be seen on the monuments. On the other hand, the warriors of Palestine are there to be seen on horseback, and horse-soldiers appear on the Assyrian sculptures. In old times, however, the horseman is mostly seen riding a bare-backed horse, or with a cloth or pad only. It seems to have been gradually that saddles proper began to be used in Assyria, and among the Greeks and Romans. Looking now at the Egyptian yoke-saddles of the chariots, one may suspect that from them were derived not only the harness-saddles in modern use, but also our riding-saddles.

Discussion.

Mr. Dickins remarked that the Chinese language—that great repository of ancient facts—corroborated the President's observations upon the hardened stick as the earliest instrument of tillage. The Chinese character, *lei*, for spade, to dig, etc., consisted of the character for tree or wood, combined with an abbreviation of a character meaning easy, the whole being simply a piece of wood, perhaps a mere branch, shaped so as to be easily used for turning up the ground. This was developed, by having a broad and flattened end, into a sort of wooden spade, the blade of which was afterwards made of metal. The Chinese plough seemed to be derived from this spade, rather than from any kind of hoe. The character for plough, *li*, consisted of the character for "ox," surmounted by an abbreviation of a sign meaning "black"—the black ox being the most prominent object on the cultivated plain—thence we may suppose that in China the plough was always worked by an ox, not by human agency. The plough did not appear to be much used in husbandry in China, where spade and hoe cultivation predominated. The same was the case in Japan; where, indeed, Mr. Dickins did not remember ever to have seen a plough at work. The Japanese name for plough, *kara-suki*, meant a Chinese (*kara*) spade or digger (*suki*). With respect to wheeled vehicles, he (Mr. Dickins) had seen Chinese pictures representing the drum-wheel or mere disc of wood, which was sometimes perforated with holes, round or otherwise shaped, arranged symmetrically, no doubt to lighten the wheel. This perhaps was a link between the drum-form and the wheel of the present day. While on this subject, Mr. Dickins begged to call attention to two most extraordinary modes of vehicular locomotion common in the Far East: the wheelbarrows in North China, adapted for the muddy paths with raised narrow stone causeway in the middle, and the jinrikshas of Japan. The word "jinriksha" was not Japanese, but Chinese, meaning man-power vehicle. Up to about ten years ago they were unknown in Japan, kagos and norimons alone being used on journeys of any length. The jinriksha was like a hansom cab with the top removed; in the shafts was not a horse, but a man, who could drag his fare along at an average rate on good ground of about 5 miles an hour, and as much as 30 miles without change of coolie. These vehicles were, it is said, invented by an American Missionary in Japan; they are hung upon springs, and are probably not a Japanese invention. The extraordinary thing about them was the marvellous rapidity with which they superseded kagos, which in a few years had almost disappeared from the country. In Yedo there were over 20,000 of these strange vehicles plying for hire. There they fulfilled the office of our cabs. The quickness with which they were adopted showed the imitative faculty of the Japanese; while the fact that for so many hundred years they had remained without them, betrayed their want of inventive power—

the more so, in that a sort of cart drawn by men and capable of holding several passengers had been in use for many years, centuries probably, on some parts of the Tôkaidô. Mr. Dickins referred to the Chinese Book of Nature ("San-tsai-t'u) and the Japanese "Wakansansai dzu-ye" (founded on the first-named work), with the "Kin-mô-dzu-i" ("Illustrated Instructor of Youth").

Mr. W. G. Smith remarked that very ancient agricultural implements were, in all probability, mounted with stone. He said he had found it by no means uncommon whilst going over ancient British positions, to find large pieces of worked flint, differing materially in shape from axe and adze forms. The former large pieces were, he said, generally somewhat rude, and might be looked upon as the mounting-pieces of ancient hoes or even ploughshares. Mr. Smith exhibited a large flint implement from his collection, worked to a hoe or ploughshare form.

March 9th, 1880.

Francis Galton, Esq., F.R.S., *Vice-President, in the Chair.*

The minutes of the last meeting were read and confirmed.

The following presents were announced, and thanks voted to the respective donors:—

For the Library.

From the Editor.—"Nature," Nos. 539, 540.
From the Editor.—"Revue Scientifique," Nos. 35, 36, 37.
From the Editor.—"The Athenæum," Part 626.
From the Editor.—Correspondenz-Blatt, February, 1880.
From the Editor.—Matériaux pour l'histoire de l'homme, Tom. X, 1879.
From the Society.—Journal of the Society of Antiquaries, Vol. VIII, No. 1.
From the Society.—Journal of the Society of Arts, Nos. 1423–1424.
From the Society.—Proceedings of the Royal Geographical Society, Vol. II, No. 3.
From the Berlin Anthropological Society.—Zeitschrift für Ethnologie, 1879, Heft 3–5.
From the Academie Royale des Sciences a Amsterdam.—Verslagen en Mededselingen, Afd. Natuurk, 2e Rks. Dl. XIV.
Jaarboek, 1878.
Processen-Verbaal, 1878-9.
From E. W. Brabrook, Esq.—"Was Adam the first Man created?" By Argus.

Notes on the Asiatic Relations of Polynesian Culture
Author(s): Edward B. Tylor
Source: *The Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 11 (1882), pp. 401-405
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From the INSTITUTE.—Catalogue of the Library of the Royal Colonial Institute, October, 1881.
From the SOCIETY.—Proceedings of the Birmingham Philosophical Society, Vol. II, Part 2.
—— Journal of the Society of Arts, Nos. 1512, 1513.
—— Journal of the Asiatic Society of Bengal, Vol. L, No. 243.
—— Journal and Proceedings of the Royal Society of New South Wales, 1880.
—— Bulletin de la Société Impériale des Naturalistes de Moscou, 1881, No. 1.
—— Zwanzigster Bericht der Oberhessischen Gesellschaft für Natur-und Heilkunde.
From the EDITOR.—"Nature," Nos. 627–629.
—— Revue Scientifique. T. XXVIII. Nos. 20, 21.

The election of C. PFOUNDES, Esq., was announced.

The following paper was read by the author:—

Notes on the ASIATIC RELATIONS *of* POLYNESIAN CULTURE.

By EDWARD B. TYLOR, D.C.L., F.R.S., V.P.A.I.

THE following informal remarks are made with the view of bringing some lately noticed facts to bear on the problem of tracing certain drifts of culture, which appear to have been going on for ages, from the interior of Asia over the south-east or Indo-Chinese region and the Indian Archipelago, and thence into the island groups of Melanesia and Polynesia, even touching points of Australia. Of late years several papers on this subject have appeared in the "Journal of the Anthropological Institute," among them Colonel Yule's tracing of Asiatic customs into the Indian Archipelago, and Mr. Keane's account of recent researches on the Khmer language of Cambodia as related to the Oceanic tongues.

The author of the present remarks has mentioned the spread of Asiatic games over the Oceanic islands, and the wide acceptance there of the cosmic-theological doctrine of the world being divided into upper and lower stages, seven or more in number, an idea which seems plainly a broken-down remnant of the Brahmanic and Buddhistic doctrine of series of successive heavens and hells, itself apparently the outcome of the theory of concentric planet-spheres, known to the Pythagorean philosophy, and seemingly traceable to yet older Babylonian astronomical ideas, to which the seven-staged temple of the seven planets at Birs-Nimrud still bears witness. The theory of the Asiatic drifts of culture over the Pacific having now a

substantial basis, it is desirable to call attention from time to time to points likely to affect it.

Mr. Carl Bock's lately published "Head Hunters of Borneo," gives a clearer idea than heretofore of the civilisation of the Dayaks, as holding an intermediate place between the Hindu civilisation, which has acted on them both in its Brahmanic and Buddhistic form, and the lower culture of the South Sea Islands. Had this traveller taken his ideas of Dayak architecture only from their village-houses, he would have underrated the traditions of ornamental design and artistic skill which he discovered when allowed to visit and sketch the secluded burial-houses of the royal families, structures on posts, adorned with animal carvings and wooden sculpture of remarkable lightness and beauty, the carved roof-projections somewhat reminding us of Cambodia and Siam. To those who have examined such types of architecture in the Malay Archipelago, it cannot seem probable that Polynesian architectural design, such as is seen in New Zealand, was the result of merely native development, but rather that it involves inherited, though broken-down traditions of Asiatic art. Attempts thus to connect Polynesia with Asia have not yet been carried far in detail, except perhaps in tracing the dwellings supported on posts or piles from such Asiatic districts as Asam far away into the ocean islands, and in General Pitt Rivers' identification of the Buddhist loop-coil ornament with a similar pattern used in New Guinea and New Zealand.

It seems worth notice that one of the Dayak musical instruments figured by Mr. Bock lies in an instructive way on the supposed line of drift of civilisation. This is the nose-flute (*op. cit.*, Plate XIX, fig. 2) a specimen of which from his collection has come to the British Museum. There is a drawing in Williams and Calvert's "Fiji and Fijians," p. 163, which shows a native girl performing on this instrument with the right nostril, while she stops the other with the thumb. In the Polynesian Islands, from the time of Cook's voyages, there are several mentions of the nose-flute. Ellis's account of the *vivo* of the Society Islands ("Polynesian Researches," Vol. i, p. 197) describes its being played much after the Fijian manner, but usually with the left nostril, and it is an instance of the slight variations of custom which establish themselves as fashions, that Mariner's "Tonga Islands," Vol. ii, p. 332, describes the *fango fango* as always filled by the right nostril. The instrument is commended by travellers for its soft plaintive tones, which often served as an accompaniment to singing. It may be traced as far as New Zealand (*see* Williams, "New Zealand Dictionary," s. v. *Kōauau*). In Waitz, Vol. vi, p. 752, it is

stated to have been observed at Port Essington, in North Australia, where probably it had been introduced by Malay traders. In all these districts the nose-flute seems not to have any practical reason, at least it is hard to imagine that any flute-player should find his nostrils to have any musical advantage over his mouth. In India, however, where the *vansi* or *pungi* have long been filled with the nostrils by snake charmers, performers at the festival of Nila-pûja, &c., a reason for this practice is currently given which may be the true explanation of its origin. A high-caste Hindu will not touch with his mouth a pipe or flute which has touched the mouth of a lower-caste man who made or may have used it, but it does not defile him to blow it with the nostril. This explanation (*see* Engel, "Music of Ancient Nations," p. 59) is stated to me as unquestionable, in answer to an enquiry made of Dr. Sourindro Mohun Tagore, of Calcutta, the best authority on Hindu music. If it be accepted as the real explanation, we may think it probable that the nose-flute, thus introduced for ceremonial reasons, followed the course of Hindu colonisation and influence, so as to become established for ordinary musical purposes in islands of the Pacific where its ceremonial caste-origin was unknown. Another Asiatic musical instrument which has found its way far out into the Indian Islands, is the simple kind of jew's harp made of a slip of bamboo.

Professor Adolf Bastian's lately published "Heilige Sage der Polynesier" gives, among the valuable results of an anthropological journey, some fresh details as to the Maori and Hawaiian mythology, which suggest to him the thought of derivation from Old World religion and philosophy. Are these, he asks, the simple playful children of nature, whom we look down on from our heights, as on men climbing the lowest steps in the development-ladder of civilisation, and yet out of whose dark primeval night there sound chords of remotest and earliest creation-history? In the Polynesian creation-poems of evolution, from zoophytes and insects to fish and pigs and man, or along the metaphysical stages of existence beginning with night, nothing, ignorance, which Bastian compares with the Buddhist chain of existences, there is, perhaps, rather a likeness in principle than an absolutely proved connection in detail with the mystic philosophies of Asia. To come to something more definite in mythological resemblance and perhaps connection, Professor Bastian lays stress, not for the first time, on the similarity between the Polynesian myth of the land being a huge fish drawn up from the depth of the ocean, and the old Scandinavian myth of Thor fishing up the great earth snake, the Midgard-worm. The resemblances are, indeed, remarkable,

even in minor points, as when in the Norseman's tale, Thor goes out in the boat with Ymir, but is obliged to provide his own bait, much as in the New Zealand story is done to Maui by his brothers. Even the name of the ox Himinbrjót, or Heaven-breaker, whose head Thor takes for his bait, reappears in the Hawaiian mythology, where the noonday sun is called the Heaven-splitter. Looking at the myth of the raising of the land-fish in its different forms in the South Sea Islands, its being a myth of Day and Night is hardly doubtful, for the fisher who hauls up the earth from the abyss below is called in one version Noon, and in another Day, while the statement that Maui's fish, the North Island of New Zealand, was drawn up from the region of the underworld of night, occurs in the most distinct way. Without asserting a positive connection between the South Sea Island and the Scandinavian stories, the subject may be taken as pointing to further enquiry likely to lead to interesting results. The possibility of such connection in mythology between the South Sea Islands and Northern Europe is proved almost beyond dispute by the occurrence in both districts of versions of the Swan-maiden or Swan-coat story, where a heavenly nymph comes down to earth to bathe, and is seized by a mortal man, who makes her his wife, but at last she flies back to her home in the sky. The original of the story may be Aryan, from Central Asia, whence it found its way, perhaps in times of no great antiquity, westward over Europe, and eastward down to the Indian Ocean, where one of its best versions is found in Celebes, another lying yet further across the ocean in New Zealand (*see* Tylor "Early History of Mankind," p. 355).

The present slight notes, only to be taken as suggestions in a problem which has to be worked out more elaborately, refer not to questions of race, but merely to the drift of civilisation from Asia across the further Eastern and Oceanic districts. How far this culture was carried by actual migration of tribes, or by slighter influences of intercourse of races with one another, is a difficult problem on which it would be premature to enter here.

Discussion.

Mr. A. H. Keane expressed the pleasure with which he had listened to Mr. Tylor's able paper, tending as it did to bring the Continental and Oceanic races into still closer connection. At the same time he could not accept the numerous points of resemblance in manners, customs, and habitations, as arguments strengthening the position he had himself taken with regard to the fundamental

unity of those races. These common features could at most prove nothing more than later contact, and the spread of Asiatic culture to the adjacent Eastern Archipelago. For the history of civilisation the paper was very valuable, and seemed to show that intercourse had been established between the more advanced Eastern peoples at a far more remote epoch than is commonly supposed.

Dr. HACK TUKE said he hardly thought the difficulty or criticism suggested by the last speaker (Mr. Keane), namely, that Dr. Tylor's argument might prove an example of *quod nimis probat, nihil probat*, would really be so if used with the caution which Dr. Tylor would no doubt employ. In the lecture on Games, for instance, which he had heard him deliver at the Royal Institution, he remembered that in taking kite-flying as an illustration, he pointed out that that game alone would not be an evidence of the contact of two nations, but that it might fairly be so if the kites were constructed in a special manner in both instances. The value of this kind of reasoning altogether depended upon the care with which it was employed. Again, he understood the author of the paper just read to employ this argument to prove, not identity of races—for of that it could be no proof—but that there had been contact and intercourse between them. Whether the instance chiefly referred to—that of the nose-flute—was a convincing instance or not, he did not feel prepared to say. It certainly did seem possible that different people, without copying the custom, might independently use their noses instead of their mouths to blow with. On other points he regarded Dr. Tylor's paper as a fair proof that the stream of civilisation, or rather habits and customs, had spread from the Asiatic continent to these islands, and regarded it as an illustration of the kind of reasoning applied to ethnic questions, in which Dr. Tylor appeared to him to excel.

M. DE LA COUPERIE, Mr. PARK HARRISON, and the CHAIRMAN also took part in the discussion.

Dr. TYLOR stated, in reply to a question, that although the doctrine of the planet-spheres first appears in a distinct form among the early Greek astronomers, there are strong grounds for inferring its connection with the seven stages of the Babylonian planet-temples. With regard to the question of race-connection between Polynesia and Asia, his present argument of course in no way opposed this, but could contribute nothing to its establishment, such things as musical instruments and myths migrating from nation to nation by mere intercourse, quite independently of race and language.

Dr. TYLOR, in the absence of the author, read the following paper:—

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OLD SCANDINAVIAN CIVILISATION *among the* MODERN ESQUIMAUX.

By E. B. TYLOR, D.C.L., F.R.S., V.P. Anthrop. Inst.

[WITH PLATES VI AND VII.]

(Read June 12th, 1883.)

THE Esquimaux race, in the state in which they became known to the civilised world in modern times, are usually regarded by anthropologists as stone-age savages, representing an early stage in the development of civilisation. In many respects this may be right, as the Esquimaux tribes from Greenland to Behrings Straits were undoubtedly found using stone implements and living as rude hunters and fishers. My present object, however, is to call attention to the fact that some of their arts and customs cannot be treated as of native development, or as properly belonging to savage life. On the contrary, they seem to be of civilised origin, and probably to have been borrowed from the Scandinavians during the long period when the Esquimaux were in intercourse with them, between A.D. 1000–1500.

Some details of the condition of the Esquimaux when they first came in contact with the Europeans may be gained from the passages in old Scandinavian chronicles referring to the Skrällings, or dwarfs (Old Norse *skräl* = little), as the usual opinion appears quite reasonable that these little people must have been Esquimaux, although met with so far south of the modern habitat of the race. The sources of information are the sagas of Eirek the Red and of Thorfinn Karlsefni, published wholly or partly in various collections, and to be found conveniently in the "Antiquitates Americanæ" (Copenhagen, 1837). Eirek's discovery of Greenland was about A.D. 982, but no mention is made of natives; indeed, it has been thought that the Esquimaux may not have migrated so early into that inclement region (see Waitz, "Anthropologie," Vol. III, pp. 300, 303). It was in A.D. 1004 that Thorvald's coasting expedition met with the Skrällings far south, at Kjalarnes (Keel-ness), which is considered to be Cape Cod. In this New England district they evidently formed a considerable population. The name given them by the Northmen to indicate their small stature, as well as the description of their dark colour, ugly hair, great eyes, and broad cheekbones, fit with the build and features of the Esquimaux rather than of other American tribes. That they brought furs to barter, and did not understand iron hatchets, proves nothing, as this might have been true of Algonquins or other of the so-called North American Indians. But the Skrällings had peculiarities of culture which are characteristic of the Esquimaux, but not of the neighbouring tribes. They paddled in skin canoes (*húdh-keipr*), apparently each holding three men;

they hurled their spears with war-slings (*val-slöngva*), a term which would perfectly apply to the wooden spear-throwers; they seem to have had the large ball-like blown-skin floats attached to their harpoons; some of them carried vessels with a mixture of marrow and blood for provision, a habit which agrees with the eating of raw meat which has remained common among the Esquimaux till modern times, and to which, indeed, they owe their name of *Eskimantsic* or "raw-flesh eaters," given them by the Abenaki Indians, and in the mouths of the French colonists passing into *Esquimaux*.

The old Scandinavian colonies in Greenland existed for centuries side by side with a nomad Esquimaux population. But the white men dwindled, and at some time in the fifteenth century, when intercourse ceased with Europe, their settlements probably ceased to exist. Doubtless the Scandinavians were partly killed off by the Esquimaux, but there is also reason to believe that some of the last survivors became merged in the Esquimaux population. This probability has been connected, not unreasonably, with the occurrence among the natives of some families whose larger build and more European feature distinguish them from the ordinary Esquimaux.

It was early in the eighteenth century that the Scandinavian missionaries reopened the long-dropped intercourse with Greenland.[1] The natives had by no means forgotten the old times when the Northmen had lived in their land; they called them *Kablunat*, a name they still give to Europeans. It seems even as if they remembered their own Old Norse name of *Skrälling*, for they sometimes called themselves *Karalit* (sing. *Karalek*), which they said was not a native word, but a name given to them by the former Christians, and as Cranz reasonably argues, this is the broken-down form which the Norse word *Skrälling* would naturally assume in an Esquimaux mouth (Cranz, "Historie von Groenland," Barby, 1765, pp. 331, 337). The modern Greenlanders have among their traditions, collected by Dr. Rink in his "Eskimoiske Eventyr og Sagn" (Copenhagen, 1866), several which record their recollections of the old Northmen, and which give an idea of the quarrels, murders, and retaliations between the two races, which were one main cause of the extinction of the white men. Our present business is to consider the condition of the Greenlanders as the Danish missionaries found them in the eighteenth century, and to examine how far their then arts, customs, &c., may be considered as adopted from the mediæval Scandinavians. The chief descriptions are:—1. Hans Egede,

[1] The voyages of Frobisher and Lindenau need not be taken account of, as probably not having had any effect on the condition of the Esquimaux.

"Det Gamle Grønlands nye Perlustration eller Naturel-Historie," Copenhagen, 1741; (the English translation published under the title "A Description of Greenland, by Hans Egede," London, 1818, is very incorrect, and only gives fragments of the illustrations). 2. David Cranz, "Historie von Groenland," Barby, 1765.

As the most striking illustration of ancient European influence on the Greenlanders, may be noticed the dress which the modern Europeans found them wearing. Fig. 1 (Plate VI), representing part of a native group of men and women playing football, is taken from Egede. Like other engravings of last century books of travel, its figures, attitudes, and dress are somewhat conventionalised in European style; nevertheless, for the present argument, it is preferable to better modern drawings, and its details can be compared with Egede's careful description of native costume, which may be relied on for the particulars of garments worn when he first arrived in the country, for he mentions the linen, cloth, and new fashions since introduced by the missionaries and traders. Egede's account (cap. xi) runs as follows:—

"*On the Greenlanders' Costume.*—Their garments consist mostly of reindeer-skin, sealskin, and also bird-skins, very neatly dressed and fashioned. The men-folks' costume is of this model; the tunic is like a jacket with a cowl, which serves them as a hood. It reaches nearly down to the knees. Some have a lappet before and behind. Their breeches are quite small, and reach not entirely over the loins, which is for convenience of getting in and out of their small boats. Next the body they have not linen, but turn in the hair of their jackets to be the warmer. Outside the jacket they have a peculiar sea-jacket, which is of sealskin with the hair stripped off, and will keep the water out when they go to sea in their small boats. Between the sea-jacket and the innermost jacket they wear either a linen shirt, or in default one of dressed sealskin, which also helps to keep the water from the inner jacket. They have besides, jackets or shirts of striped stuff or linen, as well as of blue or red cloth, but made up after their own fashion, which they buy from our people or the Dutch, and parade in them when they are in the country: likewise breeches of the same sort. Their hose or stockings are made of reindeer or sealskin, but they now mostly use woollen hose, white, blue, and red, which they also get by trade with us. Shoes and boots they have of black, gold, or red dressed and tanned sealskin, very neatly sewed, without heels, but gathered before and behind, and they fit very well on the legs and feet. The women's costume differs from the men's only in being wide and high on the shoulders, with large high hoods. The married women with

children have their jackets especially wide and roomy, that they may carry their small children within on their backs, and they use no other cradle or swaddling-clothes for them. They have two pairs of drawers, one pair inside reaching over the thigh. These they never take off, but lie with them on at night; but the outside breeches reach to the knees. These they are not wont to wear in summer, but only in winter when they are out, not when they are in the house, for they pull them off as soon as they come in. They have double jackets, one inside next the body, of reindeer-skin, with the hair turned inward, and another outside, which is also of thin-haired and smart-coloured reindeer-skin, or, in lack of this, of sealskin, edged and bordered with white within the seams, which looks smart. Their shoes are like the men-folks, but their boots have wide tops like our men's boots."

Cranz's account (Book III, Part 1), published some years later, mostly follows Egede, but adds a few points of detail. He notices that the tunic or jacket is sewn on all sides like a monk's robe, so that they thrust in their arms first and then pull the garment over their heads like a shirt. He speaks of the bird-skin jackets being worn as shirts, with the feathers inside, and says that the thin-haired reindeer over-jackets had now become so scarce that only the richest women could parade them. The stockings, he says, are of the skin of seal-fœtus, and the heelless shoes of smooth black tanned seal leather, drawn together above with a thong drawn through the thick sole. Well-to-do people had come to wear woollen stockings, hose, and caps. Fig. 2, Plate VI, is reduced from the engraving in Cranz (Plate III). The more modern Greenland dress, traceable from this early form with some modification, is depicted in Rink's work above mentioned. (English versions of Rink's writings have been edited by Robert Brown, under titles "Tales and Traditions of the Eskimo," London, 1875, and "Danish Greenland," London, 1877.)

It is evident that this costume differed utterly from the rude fur cloaks of the Fuegians in the Antarctic cold region, and indeed from any savage or low barbaric American dress. On the other hand, their coats with hoods, shirts, breeches, stockings, shoes, and boots, form, taken together, a mediæval European costume. The inference is here considered to be that the Greenlanders, early in the eighteenth century, were wearing the costume of the old Scandinavians, in which, however, for want of woollen and linen, the material throughout had come to be skin, fur, &c., and the fashion had been in some measure adapted to suit the peculiar conditions of Polar life. It is in part through the use of such highly-developed clothing, that the Esquimaux have been enabled to live in comparative comfort in their rigorous climate.

Another appliance by which the Esquimaux were enabled to live in some comfort in the Polar regions was their blubber lamp. Wanting trees, and requiring the scanty supply of drift-wood for implements and furniture, they had practically no fuel or means of lighting except fat and oil, especially seal-blubber, burnt in the lamps in question. The family compartments of a Greenland house are drawn and described by Cranz, each provided with its half-moon-shaped potstone lamp, with a wooden vessel beneath it to catch the overflowing oil, placed on a low wooden stool, and with a potstone kettle hung over it by four cords from the roof, in which all the cooking was done. The lamp was fed with blubber or train oil, and along its straight side moss, rubbed small, served for a wick, which burned so brightly that with so many lamps the house was not only lighted but warmed. Fig. 1, Plate VII, shows an Esquimaux lamp of potstone, now exhibited by Dr. Rae, brought home by him from Repulse Bay, while fig. 2, Plate VII, is taken from Nordenskjöld's "Voyage of the Vega," Vol. II, p. 22, being in use among the Chukchi of North-East Asia, the western limit to which Esquimaux life has spread. The wooden foot and drip-vessel mentioned by Cranz are drawn in Fig. 3, and the curved lamp-trimmer belongs to both. Now no lamps of this kind—in fact no lamps at all—were known to the indigenes of America, not even to the comparatively cultured Mexicans and Peruvians. On the other hand, open dish oil lamps, the same in principle as those of the Esquimaux, may be traced all across Europe and Asia. The collection of General Pitt Rivers contains some specimens, and I exhibit a modern North Italian brass one, bought within a few weeks in the market of Pallanza. In Scotland, made in iron, they were till lately the regular house-lamp, under the name of *crusie* (French *creuset*). They are often made with two dishes, the lower one to catch drippings of oil, as is shown[1] in fig. 4, Plate VII. It is interesting to notice the name *collie* given to these lamps in Shetland (see A. Mitchell, "The Past in the Present," p. 101). This is apparently the old Scandinavian word *kola*, "a small flat open lamp." The word is to be found in the Cleasby-Vigfusson "Icelandic Dictionary," with passages cited—among them one from the Old Laws of Norway ("Norges Gamle Love," Vol. II, p. 247), which is especially to the present purpose. It is a law that men are to have lights either in lanterns, or in *kolas* of stone or brass (*eda i kolum a stœni eda œri*), or in lamps. Now the Greenlanders' name for their lamp is *kollek*, remarkably corresponding with

[2] The figure is taken from a specimen presented by Dr. Garson to the University Museum at Oxford, and intended to form one of the series of lamps in the Pitt Rivers collection.

the Scandinavian term. This was well known to Egede, who noticed among words which he thought the Greenlanders had borrowed from the Old Norsemen, "*kollek*, a lamp, which in Norse is called a *kolle*." If this etymology is sound it much strengthens the present argument, but it is necessary to mention that an Esquimaux dictionary has a different etymology for the word *kollek*,[1] which if true would negative the notion of its Scandinavian derivation.[2] But etymology apart, the fact remains that the Greenlanders doubtless saw in the houses of the old Scandinavians lamps of the simple dish kind, by imitating which and substituting moss for the linen fibre wick they would obtain Esquimaux lamps. It should be noticed that kettles, &c., carved out of the steatite known to us as potstone, or *lapis ollaris*, were well known to the Scandinavians, who called this stone *talg-sten* (tallow-stone) (see Hylten-Cavallius, "Warend och Wirdarne," Part II, p. 190). It is thus likely that the Greenlanders may have learnt from the Scandinavians the art of working potstone both into kettles and lamps. If so, the use of these would spread from Greenland over the whole Esquimaux district. It is worth while to notice that Dall's examination of the shell-heaps left by tribes more or less Esquimaux in the Aleutian Islands, seems to show that in the earliest periods lamps were unknown to these tribes, but eventually came into use, rude in pattern, but on the principle of the Esquimaux lamps (W. H. Dall, in "Contributions to North American Ethnology," Vol. I, Washington, 1877).

It remains to call attention to miscellaneous points of culture among the Greenland Esquimaux, which likewise look as though adopted from the old Scandinavians. Few habits are more notable among the early Icelanders than their habit of reciting satirical verses against one another, which led to such murderous quarrels that laws were made punishing makers of "nith-songs" with exile. When the Scandinavian missionaries came, in the eighteenth century, to Greenland, they found in full vogue the custom of singing satirical songs, long almost discon-

[1] Erdmann, *Eskimoisches Wörterbuch*; *kollek*, the uppermost over anything; *kollit*, a lamp, because this in the Esquimaux house is raised above the floor; small lamps which stand quite on the ground are also called *allek* (*i.e.*, undermost). Among the other Greenland words which Egede claims as borrowed from the Northmen is *koanek*, the plant angelica, which in Norse is *qvaun*; and *nisa*, porpoise, Norse *nise*.

[2] Mr. G. Brown Goode, United States Commissioner at the International Fisheries Exhibition, who was present when the paper was read, has since communicated the fact that the Cape Cod fishermen, chiefly of English descent, used, till within the last fifty years, simple lamps of the kind here discussed, fed with dog-fish or shark oil; a few of these old lamps exist, and they are called *koil* or *kyle*, a word corresponding both to the Scandinavian and Esquimaux forms.

tinued in their own country. Egede describes the native singer accompanying himself by beating a drum, a circle of bystanders chanting the chorus. Of the songs thus performed the chief are satirical poems, and when one man has a grudge against another he will challenge him to a kind of duel of such songs, which is, so to speak, fought out before the assembly till one gives in. This was their common way of vengeance (Egede, cap. xv.; Cranz, p. 231). Rink gives a picture of a Greenlander singing a nith-song, and specimens of the songs themselves, as, for instance, one ridiculing a certain Kukouk, who was no good as a hunter, but wanted to make friends with the whites. It begins thus, the chorus alternating with the strophes:—

Bad little Kukouk, *Imakaiya haiyâ*,
(Chorus) *Imakaiya ha.*
He takes care of himself, *Imakaiya haiyâ*,
(Chorus) *Imakaiya ha.*
He wants to travel away from the land, *Imakaiya haiyâ*,
(Chorus) *Imakaiya ha.*
With a great great ship, *Imakaiya haiyâ*,
(Chorus) *Imakaiya ha.*
&c., &c., &c.

The resemblance of the custom of satirical songs was so self-evident to the Danes, that Rink actually calls them *nidvise*, the very term he would have used in describing the customs of his own Norse forefathers (Rink, "Eskimoiske Eventyr," Vol. II, p. 138; "Danish Greenland," p. 150).

It remains to quote from Egede what is by no means the weakest evidence in the present argument—his account of the Greenlanders' games. The young people, he says, have games or pastimes among them in the evening." They have a little piece of wood with a hole in one end, to which they attach by a thread a little pointed peg, and throw it up to catch the wood on the point in the hole. Now he who can twenty times running hit the hole and catch it on the pin has won, but he who cannot hit twenty times running has a black mark made on his face for every time he misses.[1] They have besides another game, which is nearly of the nature and purpose of cards and dice: namely, they have a little piece of wood pointed at one end with a peg in it. When they sit down to play, and each has staked what he thinks proper, one gives the aforesaid piece of wood a turn with his fingers, and whoever its end points to, he has won, and draws to himself all that the others have put down, at which they continue as long as they like. Ball-

[1] I learn from Mr. Vigfusson that the black mark on the loser's face still belongs to Scandinavian boys' games.

playing is their most usual sport, especially by moonlight, and they have two modes of playing. When they have divided into two parties, one casts the ball to another who is of his own party; those of the other party strive to get the ball from them, and thus it goes on by turns among them. The other mode of playing ball is that they set up two marks, 300 or 400 paces apart; dividing as before into two sides, they assemble in the middle between these goals, where they throw down the ball and kick it with their feet each toward his own goal. He who is quick on his legs and can get the ball before him, comes first to the goal and has won. Thus, they say, the souls of the dead play ball in heaven with a walrus' head, when the aurora is seen, which they hold to be the souls of the dead." (Egede, cap. xv; Cranz, Book III, Part 3). Here, then, we have four games. One is a simple kind of bilboquet, like our cup-and-ball played with the point only. One is gambling with a teetotum or revolving pointer. Of the two ball games, one is ordinary football; the other, where each side tries to get the ball from the other, is what in Old England was called hurling, and this correspondence appears still more in Egede's drawing, where the players are seen to be matched in pairs, one of each party, one laying hold of the other to prevent him from getting the ball to the goal (see Strutt, "Sports and Pastimes," *s.v.* "Hurling.") It will be agreed that the rude Esquimaux never could have invented for themselves this set of four Old World games. In all probability they learnt them from the Europeans during their four centuries of intercourse in the Middle Ages. Here I leave the subject for the present, trusting that further inquiry may separate more exactly the original Esquimaux culture from such effects of contact with the white men as are brought into notice in this paper.

Description of Plates VI and VII.

Plate VI.

Fig. 1. Group of Greenlanders playing football, showing the native dress. From Hans Egede, "Det Gamle Grønlands nye Perlustration, &c." (Copenhagen, 1741).

„ 2. Greenland man and woman, showing native dress. Reduced from Cranz's "Historie von Groenland" (Barby, 1765).

Plate VII.

„ 1. Esquimaux lamp of potstone, brought by Dr. John Rae from Repulse Bay. *a* side view of lamp; *b* top view of lamp; *c* section of lamp; *d* trimmer, also of potstone.

„ 2. Lamp of burned clay in use among the Chukchi of North-East Asia, brought home by Nordenskjöld. From the

"Voyage of the Vega," translated by G. A. Leslie (Macmillan, 1879). By permission of the publishers.

Fig. 3. Section of the Chukchi lamp, stand, and trimmer. From the same source. *a* the oil; *b* the moss wick; *c* the foot; *d* the basin under it; *e* the wooden trimmer-stick.

„ 4. Scotch dish oil-lamp, or *crusie*.

Discussion.

The President remarked that as this was the first occasion of Mr. Tylor's appearance at a meeting of the Institute since his appointment to the Curatorship of the Oxford Museum, he must offer the congratulations of the members of the Institute to that University, and express their earnest hope that this appointment, combined with the munificent gift of General Pitt Rivers's collection, might be the inauguration of a new era in the cultivation of anthropology in this country.

With regard to the subject of the paper, it was evident that there could be only three hypotheses as to the origin of the civilised customs among the Esquimaux which Mr. Tylor had described to the meeting. They must have been independently evolved, or they must have been derived from Europe or South Asia by way of Behrings Straits, or, as Mr. Tylor suggested, they were learned from the early Scandinavian settlers. Something might be urged in favour of each of these hypotheses, and therefore the subject before the meeting was an important one for discussion; its solution involved some of the principles lying at the root of this branch of anthropology.

The President also expressed the thanks of the meeting to Dr. Rae for kindly lending the Esquimaux lamp with which Mr. Tylor's paper was illustrated, and read a letter from that gentleman stating his great regret at not being able to be present at the meeting.

Mr. Walhouse observed that earthenware saucers, with a small peak and notch for receiving an oil-wick, closely resembling in shape and size the brass example from North Italy exhibited by Mr. Tylor, were commonly used all over Southern India as receptacles for oil-lights. They were used in houses, bazaars, temples, &c., usually placed in triangular niches in the walls. The same sort of little earthen platters were often found abundantly, along with other earthenware, in kistvean and prehistoric graves. Large brass lamps, with several notches for wicks round the rim, nearly resembling in general form Dr. Rae's Equimaux specimen, were also used in the temple services, as well as clusters of small brass saucers arranged on stands in diminishing circles; examples, the speaker thought, were to be seen in the India Museum.

Mr. Berdoe asked the author if he did not think it probable that the source of evolution of the saucer-shaped lamp of the Esquimaux, and others of the same shape, was some shallow shell,

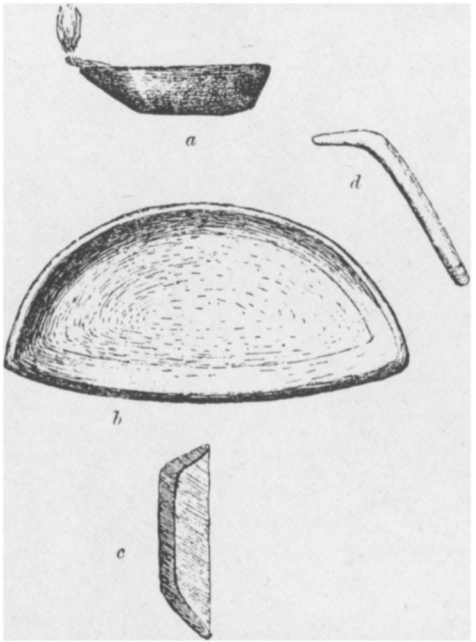

FIG. 1.

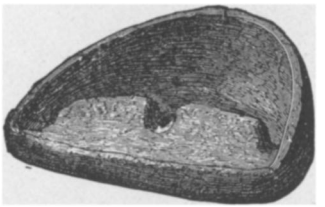

FIG. 2.

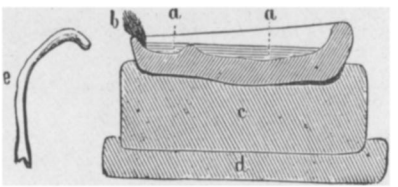

FIG. 3.

FIG. 4.

OIL LAMPS FROM (1) REPULSE BAY, (2 & 3) NORTH-EAST ASIA, AND (4) SCOTLAND.

and if he could give the meeting any facts bearing on this question.

General PITT RIVERS, Mr. A. TYLOR, and Mr. RUDLER also joined in the discussion, and the AUTHOR briefly replied.

On a PALÆOLITHIC FLOOR *at* NORTH-EAST LONDON.

By WORTHINGTON G. SMITH, F.L.S., &c.[1]

[WITH PLATES VIII TO XXIII.[2]]

I FIRST noticed the thin stratum of flint, in some places full of Palæolithic implements and flakes, and termed by me a "Palæolithic floor," in the beginning of 1878, on the south side of Stoke Newington Common, London; later in the spring I observed a similar stratum in the fields and market gardens on the north side of the Common, and eventually in many other places for three or four miles to the north, south, and west from this centre. On June 25th, 1878, I read a brief paper before this Institute, calling attention to the implements found by me (many *in situ*) at Stoke Newington, Shacklewell, Lower Clapton, and many other places. At the same meeting I exhibited a broken implement and flakes found by myself at Grays Thurrock, and others from West Tilbury, in South Essex.

Until 1878 only one implement had been found in an excavation in this district: this was lighted on by Mr. Norman Evans at Highbury in 1868, and is figured in Mr. John Evans's "Ancient Stone Implements of Great Britain," p. 525. This is a kind of side scraper, and is undoubtedly derived from the "Palæolithic floor," as I have since seen the "floor" in section at the spot where the instrument was found, and I have seen the implement itself, which exactly agrees in colour and sharpness with other implements from the same neighbourhood. Moreover, I have one found by myself almost exactly like it.

Two other implements had been found in the streets: one on the Lower Clapton side of Hackney Downs, in 1866, by Mr. G. H. Gaviller, and the other in Dunlace Road, Lower Clapton, by Mr. Anscombe; the latter instrument is in the Museum of Practical Geology, Jermyn Street.

[1] This paper was read before the Anthropological Institute by Mr. W. G. Smith on June 26th, 1883, and has since been brought up to the present date (January, 1884) by the author.

[2] These plates have been supplied by the author. Some of the illustrations have already appeared in "Nature" or in the "Transactions of the Essex Field Club," while others have been prepared by Mr. W. G. Smith for this paper.

On a Method of Investigating the Development of Institutions; Applied to Laws of Marriage and Descent
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—— Science. Nos. 281–299.
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—— Revue d'Anthropologie. Tom. iii, 1888. No. 4.
—— Revue d'Ethnographie. Tom. vi, 1888. Nos. 1–3.
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—— Bullettino di Paletnologia Italiana. T. iv. N. 5–8.
—— Ethnologische Mittheilungen aus Ungarn. I Jahrgang. 1887–88. Heft 2.

The following paper was read by the Author:—

On a METHOD *of* INVESTIGATING *the* DEVELOPMENT *of* INSTITUTIONS; APPLIED *to* LAWS *of* MARRIAGE *and* DESCENT.

By EDWARD B. TYLOR, D.C.L., F.R.S.

FOR years past it has become evident that the great need of anthropology is that its methods should be strengthened and systematised. The world has not been unjust to the growing science, far from it. Wherever anthropologists have been able to show definite evidence and inference, for instance, in the development series of arts in the Pitt-Rivers Museum, at Oxford, not only specialists but the educated world generally are ready to receive the results and assimilate them into public opinion. Strict method has, however, as yet only been introduced over part of the anthropological field There has still to be overcome a certain not unkindly hesitancy on the part of men engaged in the precise operations of mathematics, physics, chemistry, biology, to admit that the problems of anthropology are amenable to scientific treatment. It is my aim to show that the development of institutions may be investigated on a basis of tabulation and classification. For this end I have taken up a subject of the utmost real as well as theoretical interest, the formation of laws of marriage and descent, as to which during many years I have been collecting the evidence found among

between three and four hundred peoples, ranging from insignificant savage hordes to great cultured nations. The particular rules have been scheduled out into tables, so as to ascertain what may be called the "adhesions" of each custom, showing which peoples have the same custom, and what other customs accompany it or lie apart from it. From the recurrence or absence of these customs it will be our business to infer their dependence on causes acting over the whole range of mankind.

Years since, long before my collection of data approached its present bulk, and could be classified into the elaborate tables now presented, I became naturally anxious to know whether the labour had been thrown away, or whether this social arithmetic would do something to disclose the course of social history. The question was how to make the trial. I remembered a story I had once heard of Horace Vernet, that a friend asked him how he planned out his huge battle-pieces. The painter took the inquirer into his studio and began a picture for him by first touching in a bayonet in one corner of his canvas, then drawing the arm and sabre of the trooper slashing over the bayonet-thrust, and so on from one overlapping figure to the next till he reached the central group. It seemed to me that it would be well to begin thus in one corner of the field. The point I chose was a quaint and somewhat comic custom as to the barbaric etiquette between husbands and their wives' relatives, and *vice versâ*: they may not look at one another, much less speak, and they even avoid mentioning one another's names. Thus, in America, John Tanner, the adopted Ojibwa, describes his being taken by a friendly Assineboin into his lodge, and seeing how at his companion's entry the old father and mother-in-law covered up their heads in their blankets till their son-in-law got into the compartment reserved for him, where his wife brought him his food. So in Australia, Mr. Howitt relates how he inadvertently told a native to call his mother-in-law, who was passing at some little distance; but the blackfellow sent the order round by a third party, saying reproachfully to Mr. Howitt, "You know I could not speak to that old woman." Absurd as this custom may appear to Europeans, it is not the outcome of mere local fancy, as appears on reckoning up the peoples practising it in various regions of the world, who are found to be about sixty-six in number, that is, more than one-sixth of the whole number of peoples catalogued, which is roughly three-hundred and fifty. Thus:—

Avoidance.

Between H. and W.'s Rel.	Mutual.	Between W. and H.'s Rel.
45	8	13

Now, on looking out from the schedules the adhesions of this avoidance-custom, a relation appears between it and the customs of the world as to residence after marriage. This is seen in the following computation of the peoples whose habit is for the husband to take up his abode with the wife's family permanently, or to do so temporarily and eventually to remove with her to his own family or home (the reverse of this does not occur), or for the husband at once to take home the wife.

Residence.

H. to W.	Removal	W. to H.
65	76	141

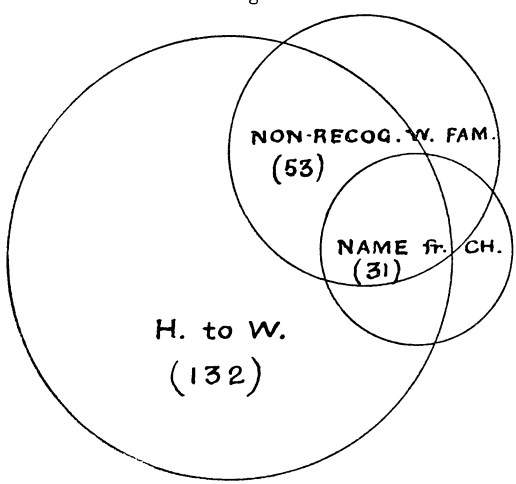
Now, if the customs of residence and the customs of avoidance were independent, or nearly so, we should expect to find their coincidence following the ordinary law of chance distribution. In the tribes where the husband permanently lives with his wife's family (sixty-five out of three hundred and fifty), we should estimate that ceremonial avoidance between him and them might appear in nine cases, whereas it actually appears in fourteen cases. On the other hand, peoples where the husband at marriage takes his wife to his home (one hundred and forty-one out of three hundred and fifty), would rateably correspond with avoidance between him and her family in eighteen cases, whereas it actually appears in nine cases only. Also, if the thirteen cases of avoidance between the wife and the husband's family were divided rateably among the different modes of residence, two or three cases should come among the peoples where the husband lives with the wife's family, but there are no such cases. On the other hand, five cases should be found among the peoples where the wife lives in the husband's home or family, but actually there are eight. Thus there is a well marked preponderance indicating that ceremonial avoidance by the husband of the wife's family is in some way connected with his living with them; and *vice versâ* as to the wife and the husband's family. Hereupon, it has to be enquired whether the facts suggest a reason for this connexion. Such a reason readily presents itself, inasmuch as the ceremony of not speaking to and pretending not to see some well-known person close by, is familiar enough to ourselves in the social rite which we call "cutting." This, indeed, with us implies aversion, and the implication comes out even more strongly in objection to utter the name ("we never mention her," as the song has it). It is different, however, in the barbaric custom we are considering, for here the husband is none the less on friendly terms with his wife's people because they may not take any notice of one another. In fact, the expla-

nation of this ceremonial cutting may be simpler and more direct than in civilised Europe. As the husband has intruded himself among a family which is not his own, and into a house where he has no right, it seems not difficult to understand their marking the difference between him and themselves by treating him formally as a stranger. So like is the working of the human mind in all stages of civilisation, that our own language conveys in a familiar idiom the same train of thought; in describing the already mentioned case of the Assineboin marrying and taking up his abode with his wife's parents who pretend not to see him when he comes in, we have only to say that they do not *recognise* him, and we shall have condensed the whole proceeding into a single word. In this first example, it is to be noticed that the argument of a causal connexion of some kind between two groups of phenomena brings into view, so far at least as the data prove sound, a scientific fact. But we pass on to less solid ground in assigning for this connexion a reason which may be only analogous to the real reason, or only indirectly corresponding with it, or only partly expressing it, as its correlation with other connexions may eventually show. This important reservation, once stated, may be taken as understood through the rest of the enquiry.

Let us now turn to another custom, not less quaint-seeming than the last to the European mind. This is the practice of naming the parent from the child. When Moffat, the missionary, was in Africa among the Bechuana, he was spoken to and of, according to native usage, as Ra-Mary = father of Mary. On the other side of the world, among the Kasias of India, Colonel Yule mentions the like rule; for instance, there being a boy named Bobon, his father was known as Pabobon. In fact there are above thirty peoples spread over the earth who thus name the father, and, though less often, the mother. They may be called, coining a name for them, *teknonymous* peoples. When beginning to notice the wide distribution of this custom of *teknonymy*, and setting myself to reckon its adhesions, I confess to have been fairly taken by surprise to find it lying in close connection with the custom of the husband's residence in the wife's family, the two coinciding twenty-two times, where accident might fairly have given eleven. It proved to be still more closely attached to the practice of ceremonial avoidance by the husband of the wife's relatives, occurring fourteen times, where accident might have given four. The combination is shown on the diagram, fig. 1, the (appproximate) numbers on which give the means of estimating the probable closeness of causal connection. Were the three customs so distantly connected as to be practically independent, the product of the corresponding fractions

$\frac{132}{350} \times \frac{53}{350} \times \frac{31}{350}$, multiplied into the three hundred and fifty peoples would show that their concurrence might be expected to happen between once and twice in the list of peoples of the world. In fact it is found eleven times. Thus, we have their common causation vouched for by the heavy odds of six to one. Many of the firmest beliefs of mankind rest, I fear, on a less solid basis. In tracing out the origin of the group of customs in conformity with these conditions, it is not necessary to invent a hypothesis, as an account of the proceedings of the Cree Indians will serve as a "luminous instance" to clear up the whole situation. Among these Indians the young husband, coming to live with his wife's parents, must turn his back on

Fig. 1.



them, not speaking to them (especially not to his mother-in-law), being thus treated as a stranger till his first child is born; whereupon he takes its name, and is called "father of So-and-so," and thenceforth attaches himself to his parents-in-law rather than to his own parents. That is to say, he is ceremonially treated as a stranger till his child, being born a member of the family, gives him a status as father of a member of the family, whereupon they consistently leave off the farce of not recognising him. When I brought this argument to the knowledge of Dr. G. A. Wilken, of Leyden, he pointed out to me that in his series of papers on "Primitive Forms of Marriage,"[1] where he

[1] G. A. Wilken, "Over de primitieve vormen van het huwelijk, &c.," in "Indische Gids," 1880, &c.

gives instances of the naming of fathers from children, he had stated this practice to be an assertion of paternity. Undoubtedly it is so on the father's part, and its being so is quite compatible with its being a recognition of him by the wife's kinsfolk, the two aspects belonging to one social fact.

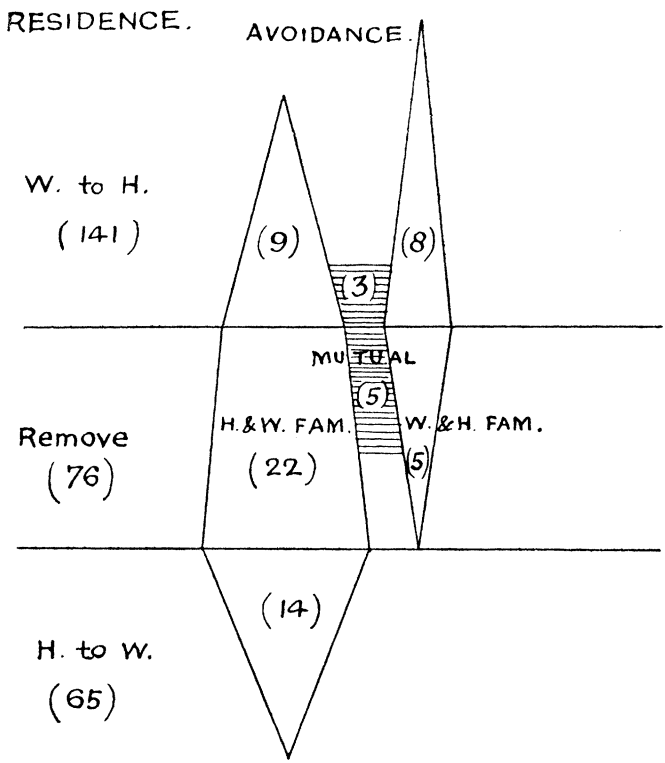
Taking the connection between residence and ceremonial avoidance to be substantiated by their relative adhesions, it is necessary to notice that there are cases where the husband, although he carries the wife away from the home of her parents, nevertheless goes through the form of avoiding them. This, under the circumstances, seems a motiveless proceeding, but is intelligible as a survival from a time when he would have lived with them. These cases belong mainly to the Malay District and to Australia. In the Malay District the habit of residence in the wife's family is still a notable institution of the country, though being fast superseded by householding on the Arab and European models. In Australia, the native custom is described as being that the husband takes his wife to his own home, while at the same time he carries out the etiquette of cutting his mother-in-law to a ludicrous extreme, with slight traces of the avoidance of the father-in-law. It appeared to me that on the present explanation this must indicate a recent habit of residence on the wife's side, and reference showed a law of the Kurnai tribe of Gippsland,[1] that when a native kills game, certain parts of the meat (of a kangaru, the head, neck, and part of the back) are the allotted share of the wife's parents. As the duty of supplying game to the wife's household when the husband lives there is one of the best-marked points of matriarchal law, I wrote to Mr. Howitt, as the leading authority on Australian anthropology, suggesting that further enquiry would probably disclose evidence hitherto unnoticed as to the maternal stage of society subsisting in Australia. After examination made, Mr. Howitt replied :—"I am now satisfied that your surmises are quite correct," and therewith he sent details bearing on the question, especially an account by Mr. Aldridge, of Maryborough, Queensland, as to the practice of the tribes in his neighbourhood. This I will quote, as being a strongly marked case of residence on the wife's side. "When a man marries a woman from a distant locality, he goes to her tribelet and identifies himself with her people. This is a rule with very few exceptions. Of course, I speak of them as they were in their wild state. He becomes part of and one of the family. In the event of a war expedition, the daughter's husband acts as a blood-relation, and will fight and kill his own blood-relations if blows are struck by

[1] Fison and Howitt, "Kamilaroi and Kurnai," p. 207.

his wife's relations. I have seen a father and son fighting under these circumstances, and the son would most certainly have killed his father if others had not interfered."

The relative positions of the two groups of customs, residence and avoidance, may now be more completely shown, by the aid of the diagram, fig. 2.

Fig. 2.



Here the space representing residence is divided into three sections, viz., residence on the wife's side; the transitional stage of removal (where the couple begin married life in the wife's house, but eventually move); residence on the husband's side. According to the previous arguments, the ceremonial avoidance between the husband and the wife's family is taken to have arisen within the periods when he and they lived permanently or temporarily in contact, and to have continued by survival

into the period after this co-residence had ceased. There next appear the small group of eight cases of mutual avoidance, at once between the husband and the wife's family, and the wife and the husband's family. These consistently are found in the removal stage, where both kinds of residence meet, surviving into the stage of residence on the husband's side. Avoidance between the wife and the husband's family has the same range, but here the conditions producing it belong to both stages of residence, and there is no question of survival.

From this distribution of the avoidance-customs, it appears that in the parts of the world open to the present inspection, the three stages of residence have tended to succeed one another in the upward order of the diagram. Residence on the wife's side appears earliest, after this the removal stage, and latest, residence on the husband's side. For if it be supposed that the course of society was in the reverse direction, as would be represented by turning the diagram upside down, avoidance between the husband and the wife's family would be represented as arising in the stage when the husband lived away from it, while avoidance between the wife and the husband's family, which ought on this supposition to continue by survival into the stage of residence on the wife's side, is not found there. The avoidance-customs, though practically so trifling, are thus signals showing the direction of a movement, of which we shall more fully see the importance, namely, the shifting of habitual residence from the wife's family to the husband's.

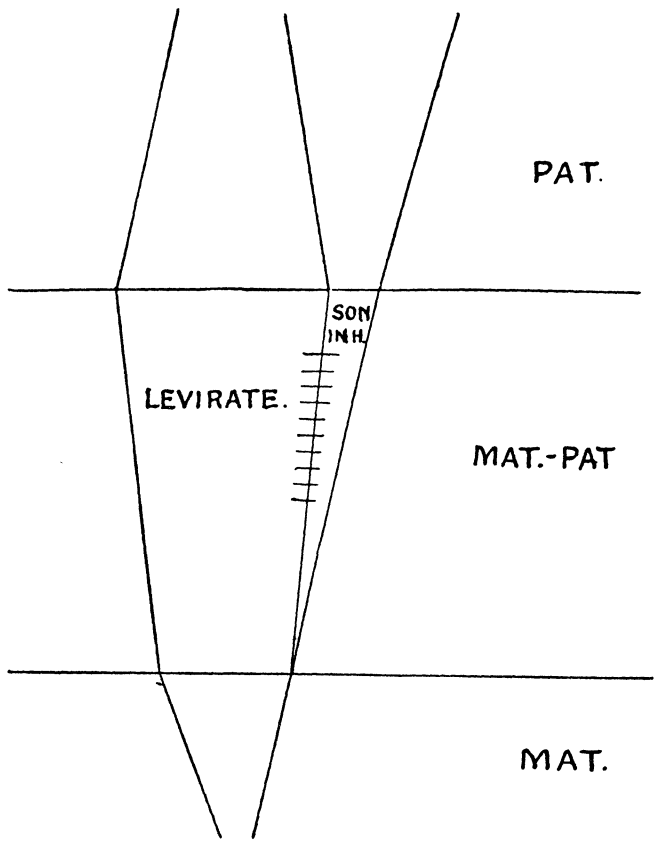
Let us now proceed to apply a similar method to the investigation of the great division of society into matriarchal and patriarchal. In the matriarchal system, descent in the family or clan is reckoned from the mother; authority is mainly on her side, the mother's brother being habitually guardian of the children; succession to rank and office, and inheritance of property, follow the same line passing to the brother or to the sister's son. In the patriarchal system descent is from the father; he has the power over wife and children; succession and inheritance are from him to his offspring. Between these extreme stages lies an intermediate or transitional stage in which their characteristics are variously combined. The terms patriarchal and matriarchal not being quite appropriate, I shall use in preference for the three stages the terms maternal, maternal-paternal, and paternal. The classification is necessarily somewhat vague, but I think will be found to have sufficient precision for the problem of determining the direction in which mankind has tended to move from one of the stages to another. In dealing with this problem certain customs relating to marriage law will be used as indicators.

Among a large proportion of the nations of the world up to the middle levels of culture, the re-marriage of widows is arranged, and more or less enforced, but the regulations are framed on two distinct principles. On the first principle the widow becomes the wife of her husband's brother, or near kinsman, according to some recognized order of precedence of claim. The word "levirate," from *levir* = husband's brother, has become the accepted term for this institution, but its sense must in most cases be extended to take in a series of kinsmen, among whom the brother-in-law only ranks first. Unfortunately, it has seldom been thought worth while to ascertain this precise order, which might throw light on family structure, as in an account drawn up by Mr. Howitt of the practice in Australian tribes where any man is eligible to succeed to the widow, if he stands in the relation of elder or younger brother to the deceased, beginning with actual brothers on the male or female side, according to the rule of descent in the tribe, and extending to tribal brothers who are in our terminology cousins, more or less near. The levirate appears in its various forms among one hundred and twenty peoples in my list, or about one in three in the world. On taking out its adhesions it seems sufficiently accounted for as a custom of substitution, belonging to the period when marriage is a compact not so much between two individuals as between two families, often made when the couple are infants unable to understand it, in fact sometimes before their birth. That the levirate forms part of this family transaction is consistent with other customs more or less associated with it, viz., that when a wife dies or turns out ill her family are bound to replace her by another, a rule which sometimes even holds for betrothal, and that the widow is not allowed to marry out of her husband's family unless by leave of his kinsmen, who have the choice of keeping her, or parting with her, usually for a price. The social distribution of the levirate is shown in fig. 3 to extend through all three social stages. It is in the maternal-paternal stage that it comes into competition with the second principle, unknown in the maternal stage, in which the father's widows pass by inheritance to his sons, especially the eldest son taking his stepmothers. A small but important group of cases forms a bridge between the two principles of levirate and filial succession, combining both in the same nation. This combination is well shown in Africa, where on a chief's death the head wife will pass by levirate to his brother, while her son, the new chief, will inherit a crowd of stepmothers, a less onerous legacy indeed than may seem, as they are practically slaves who hoe and grind corn for their own living. Looking at the distribution of these groups of customs,

it is seen to be only compatible with the view that the paternal rule followed the maternal, bringing with it even while its prevalence was but partial, the principle of paternal widow-inheritance.

The quaint custom of the couvade has now to be considered

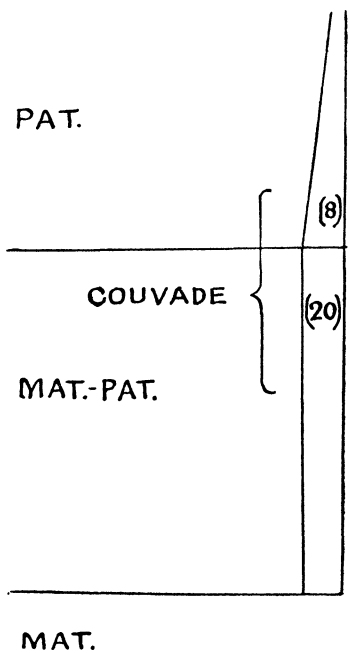
Fig. 3.



from the same point of view. In this the father, on the birth of his child, makes a ceremonial pretence of being the mother, being nursed and taken care of, and performing other rites such as fasting and abstaining from certain kinds of food or occupation, lest the new-born should suffer thereby. This custom is known in the four quarters of the globe. How sincerely it is still accepted appears in a story of Mr. Im Thurn, who on a

forest journey in British Guiana noticed that one of his Indians refused to help to haul the canoes, and on enquiry found that the man's objection was that a child must have been born to him at home about this time, and he must not exert himself so as to hurt the infant. In the Mediterranean district it is not only mentioned by ancient writers, but in Spain and France, in or near the Basque country, it went on into modern times; Zamacola, in 1818, mentions, as but a little time ago, that the mother used to get up and the father take the child to bed. Knowing the tenacity of these customs, I should not be surprised

Fig. 4.



if traces of couvade might be found in that district still. Now examining the distribution of the couvade by the diagram, Fig. 4, we see that this farcical proceeding does not appear in the maternal stage, but arising in the maternal-paternal, at once takes its strongest development of twenty cases; in the paternal the number falls to eight cases, leading to the inference that here it is only kept up in dwindling survival.

Looking at this position, I must now argue that the original interpretation of the couvade given by Bachofen in his great

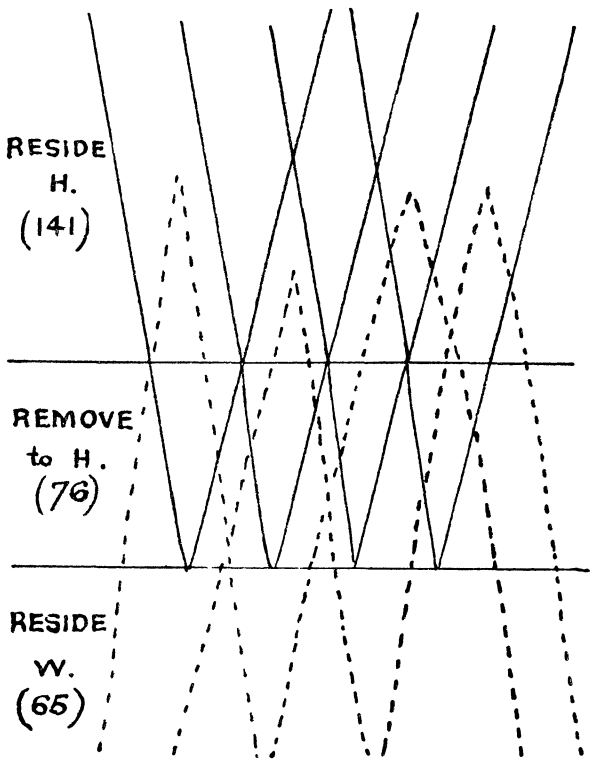
treatise[1] in 1861, and supported by Giraud-Teulon, fits substantially with the facts, and is justified by them. He takes it to belong to the turning-point of society when the tie of parentage, till then recognised in maternity, was extended to take in paternity, this being done by the fiction of representing the father as a second mother. He compares the couvade with the symbolic pretences of birth which in the classical world were performed as rites of adoption. To his significant examples may be added the fact that among certain tribes the couvade is the legal form by which the father recognizes a child as his. Thus this apparently absurd custom, which for twenty centuries has been the laughing-stock of mankind, proves to be not merely incidentally an indicator of the tendency of society from maternal to paternal, but the very sign and record of that vast change.

The distribution of customs in figs. 3 and 4 is only compatible with a tendency of society to pass from the maternal to the paternal systems, the maternal being placed as earliest from the absence of survivals from other stages extending into it, as they freely do into the paternal, which is therefore placed as latest. The argument is a geological one. Just as the forms of life, and even the actual fossils of the Carboniferous formation, may be traced on into the Permian, but Permian types and fossils are absent from the Carboniferous strata formed before they came into existence, so here widow-inheritance and couvade, which, if the maternal system had been later than the paternal, would have lasted on into it, prove by their absence the priority of the maternal. Thus the present method confirms on an enlarged and firm basis the inference as to the antiquity of the maternal system arrived at by the pioneers of the investigation, Bachofen and McLennan, and supported by the later research of a generation of able investigators—Morgan, Lubbock, Bastian, Giraud-Teulon, Fison, Howitt, Wilken, Post, Lippert, and others. By this it is not, however, meant to imply that the maternal form of family as here set forth represents the primitive condition of mankind, but that it is a stage through

[1] J. J. Bachofen, "Das Mutterrecht," pp. 17, 255; Giraud-Teulon, "Les Origines du Marriage," p. 138. In my account of the couvade, "Early History of Mankind," Chap. x, I have laid stress on the magical-sympathetic nature of a large class of couvade rites as implying a physical bond between parent and child; thus an Abipone would not take snuff lest his sneezing might hurt his newborn baby, and a Carib father must abstain from eating sea-cow lest his infant should get little round eyes like it. This motive, which is explicity or implicitly recognised by the savages themselves, certainly forms part of the explanation of the couvade. It is, however, secondary, being due to the connexion considered as subsisting between parent and child, so that these sympathetic prohibitions may be interpreted as originally practised by the mother only, and afterwards adopted by the father also.

which the inhabitants of a great part of the world now in the paternal appear to have passed, and which still continues in force over considerable tracts of every part of the globe except Europe. It seems probable that this maternal system arose out of an earlier and less organised and regulated condition of human life. As to this problem, however, though the present schedules are not devoid of information, I have not been able

Fig. 5.



to bring the general evidence into shape sufficiently to justify my offering a theory here.

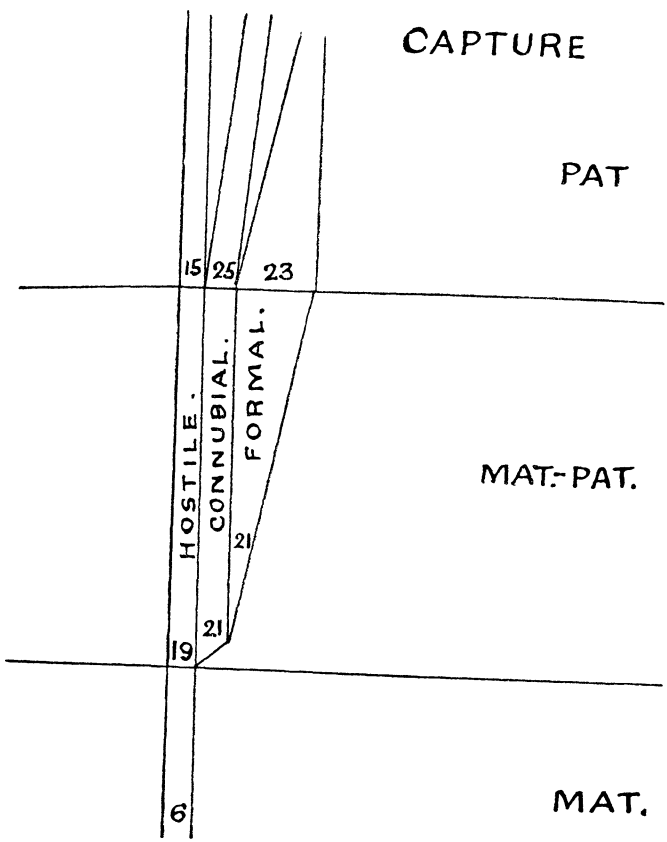
The analogy has already come into view between the division of society according to residence, and according to the maternal and paternal systems. This relation, the reality of which is evident from mere consideration of the difference as to family life which must ensue from the husband living in the wife's house or the wife living in the husband's, may be corroborated

from the schedules. Thus the number of coincidences between peoples where the husband lives with the wife's family and where the maternal system prevails, is naturally large in proportion, while the full maternal system as naturally never appears among peoples whose exclusive custom is for the husband to take his wife to his own home. But as I have pointed out, the maternal and paternal systems are not each a definite institution, but combinations in which more or less strictly the authority, descent, succession, inheritance follow the female or the male side. The imperfection of my schedules makes it desirable for me to postpone an attempt to work out numerically the intricate problem of the mutual relations of these social rules till more perfect data are accessible. I have made, however, a rough sketch illustrative of the hypothesis suggested by the diagrams figs. 3 and 4, namely that in the one simple fact of residence we may seek the main determining cause of the several usages which combine to form a maternal or paternal system. This sketch, fig. 5, is meant to suggest the social movement which the schedules seem to imply. Division according to residence on the female or male side is taken as the fundamental fact, and the lines show the institutions of female descent, avuncular authority, &c., arising in the stage of residence on the female side, and extending into the stages of removal and residence on the male side. Within these two latter stages it is that male descent, paternal authority, &c., arise and extend onward in history. This direction is indeed consistent with what our own knowledge of human nature would lead us to expect. We can well understand how when the man lives in his wife's family his power will count for little against the combined authority of her maternal uncles and brothers, whereas when he takes her to his own home, he is apt to become master of the household; and we should expect the rules of descent, succession, and inheritance to follow the same order. Actual record of such transition is very rare, but at any rate one observer, the Hon. J. W. Powell, of the Bureau of Ethnology at Washington, has had both the opportunity to see and the skill to see what he was seeing, with the result of convincing himself that the transition from maternal to paternal society has in great measure depended on residence. I quote a passage of a letter from him:—"It would seem from such opportunities as I have had to collect facts in the field that hunting and other parties are frequently organised in such a manner that the male members of a clan group proceed together in company with their wives and children. Under such circumstances the control of the family necessarily falls into the hands of the husbands and fathers." This happens among the Pueblo Indians, a matriarchal

people with female descent, whose clans, in consequence of the scarcity of water for irrigation in their desert region, are obliged to separate widely for the cultivation of lands at a distance from the central Pueblo. The result is that the control of families and the training of children are temporarily taken out of the hands of their own kin on the mother's side, and with the acquisition of cattle in these new homes comes the tendency to settle there permanently. Observation of these facts led Major Powell to adopt the hypothesis that clanship by female descent passed in this way into clanship by male descent by the segregation of clans for industrial purposes.

The next diagram, fig. 6, throws more light on the great social transformation. It shows the distribution of the practice

Fig. 6.



of marriage by capture. When the accounts of national custom are classified they show that capture (which belongs to over one hundred of the peoples scheduled) can be more or less accurately divided into three kinds:—Hostile capture, when warriors of one tribe bring away as captives women of another tribe is a feat of arms praised in history short of the highest levels of culture. There were fierce Indians of the Pampas who held that their god, the Great Eagle, told them to live by making war on all other tribes, slaying their men and carrying off their women and children. The same spirit is heard in the hopes of Sisera's host to divide the spoil, to every man a damsel or two. Looking at hostile capture from the anthropological point of view, we have to notice that it exists equally through the three stages of society, from maternal to paternal. Now it obviously conflicts with full matriarchal institutions that a man should bring in a captive wife, for he cannot take her home to his mother-in-law. To understand such a custom appearing within the range of matriarchy at all, we must remember that a captive has no rights, so that what happens to her does not immediately affect the regular custom of the tribe, which applies to native free women. Yet even here the tendency of capture must always have been to upset the maternal arrangements. When capture comes to be an accepted mode of marriage between or among tribes or clans who live at peace and habitually intermarry, it is evident that such "connubial capture," as it is described on the diagram, can only consist with the paternal system, inasmuch as the husband necessarily carries the wife to his own home, thereby setting on foot a paternal household. This is true also of the cases where the capture has become a merely formal ceremony, accompanying a marriage settled beforehand, for the very form of capture involves the bridegroom coming with his friends to carry the bride to his home. This is the interpretation of the fact, made evident in the diagram, that connubial and formal capture belong only to the intermediate stage where paternal institutions are arising, and to the later stage where they are fully established. The effect of capture in breaking up the maternal system, and substituting the paternal for it, has thus to be taken into account as a serious factor in social development. There is at least one region of the world where the operation may be seen going on at this day—the Malay Islands. To quote the concise description by Riedel of the matrimonial arrangements of the Babar Archipelago:—"The men follow the women, and live in their houses. The children also belong to the wife's family. If a man is rich enough he may marry seven wives, who all remain in the houses of their parents. A man who has many wives is

respected. The robbery of a wife from another clan (*negari*) is an honour, and the children follow the father, with or without payment of the fine attached to the deed. Smaller or weaker clans even demand no fine."[1] In the Kisar and Wetar island groups a like state of things appears, the maternal system being the recognised rule, but always liable to pass into the paternal system by capture, which brings wife and children into the husband's hands.

At this point it will be convenient to examine two institutions of early marriage law, namely, exogamy and classificatory relationship. The principle of exogamy was brought prominently into view fifty years ago, by Sir George Grey,[2] when he described the native Australian rule for a man not to marry a woman of the same family name or bearing the same animal-crest or kobong as himself; and called attention to the coincidence of this with the North American system of clans named from totem animals, a man being bound to marry outside his own totem or clan. Mr. J. F. McLennan[3] gave these customs the name of exogamy or "marrying-out," and showed them to belong to "a most widely prevailing principle of marriage law among primitive races." Much information has since then come in, with the result of showing that exogamy has hardly to do with the capture of wives in war between alien nations, but rather with the regulation of marriages within groups of clans or tribes who have connubium; such clans or tribes may be more or less at strife, but they acknowledge ties of kindred and are usually allied by language. It is now also understood that a people may at once practice endogamy or 'marrying-in" within its borders, and exogamy or "marrying-out" of its clans with one another. The situation may be understood among the Hindus, where a man must marry in his caste, but within that caste must not marry in his own gotra or clan. The effect of an exogamic rule is similar whether clanship follows the female or male line of descent. Next, as to the principle of classificatory relationship, an early mention of this is by Father Lafitau,[4] above one hundred and fifty years ago, who states that "among the Iroquois and Hurons all the children of a cabin regard all their mother's sisters as their mothers, and all their mother's brothers as their uncles, and for the same reason they give the name of fathers to all their

[1] Riedel, "De Sluik- en Kroesharige Rassen tusschen Selebes en Papua," p. 351; see 415, 448.

[2] Grey, "Journals of Two Expeditions in N.W. and W. Australia," Vol. II, p. 225.

[3] J. F. McLennan, "Primitive Marriage," pp. 48, 130.

[4] Lafitau, "Mœurs des Sauvages Ameriquains," Paris, 1724, Vol. I, p. 552.

father's brothers, and aunts to all their father's sisters. All the children on the side of the mother and her sisters, and of the father and his brothers, regard each other mutually as brothers and sisters, but as regards the children of their uncles and aunts, that is, of their mother's brothers and father's sisters, they only treat them on the footing of cousins. . . . . In the third generation this changes, the great uncles and great aunts become again grandfathers and grandmothers of the children of those whom they called nephews and nieces. This continues always in the descending line according to the same rule." In our own time, Lewis H. Morgan, living among the Iroquois as an adopted Indian, was struck with this system of relationships, so unlike what he had been brought up among, and which he at first thought to be a peculiar invention of his Iroquois. But finding, on enquiry, that it extended to other North American tribes, he eventually by circulating interrogatories succeeded in collecting a great series of systems of relationship, in which he established the wide prevalence of classificatory systems, as he called them from the relatives being grouped in classes.[1] Under the term classificatory systems, Mr. Morgan included not only those approximating to the Iroquois type, but a much simpler and ruder plan prevalent in Polynesia; it is, however, convenient for me to confine my remarks here to the former group only. This system, as found among the American Indians, Mr. Morgan showed to be closely analogous to that of the Dravidian nations of Southern Hindustan. This latter is a well-known source of perplexity to a newly appointed English civilian, who may be told by a witness that his father was sitting in the house, but presently the same witness mentions his father as coming in from the field; the native is sharply reproved by the judge for contradicting himself, whereupon he explains, it was my "little father," by which he means his father's younger brother.

I am placing together the two institutions, exogamy and classificatory relationship, inasmuch as they are really connected, being in fact two sides of one institution. This was made out eight years ago, by the Rev. Lorimer Fison, in the work on the Kamilaroi and Kurnai tribes of Australia by him and Mr. Howitt.[2] This important explanation is still scarcely known to anthropologists, nor indeed, have I much right to reproach others with neglecting it, for I reviewed Fison and Howitt's book without distinctly realising the bearing of this argument on the theory of exogamy, which only came round to

[1] L. H. Morgan, "Systems of Consanguinity and Affinity of the Human Family" (Smithsonian Contributions, 1871).

[2] Fison and Howitt, "Kamilaroi and Kurnai," 1880, p. 76.

me lately in a way which I had better now describe, as it will enable me to explain shortly and plainly the whole problem. In tabulating the nations of the world, I found a group of twenty-one peoples whose custom as to the marriage of first cousins seemed remarkable; it is that the children of two brothers may not marry, nor the children of two sisters, but the child of the brother may marry the child of the sister. It seemed obvious that this "cross-cousin marriage," as it may be called, must be the direct result of the simplest form of exogamy, where a population is divided into two classes or sections, with the law that a man who belongs to Class A can only take a wife of Class B. Such a division, for instance, is familar in Melanesia. Dr. R. H. Codrington describes it in the Banks Islands, where the natives have two families, called *veve* = mother, which implies that descent follows the mother's side, and a man must marry a wife of the other mother from himself, or as they say, not on his own side of the house but on the other. Thus, taking A, *a*, B, *b*, as males and females of the class A and B, and bearing in mind that the mother's children are of her class, but the father's children of the opposite class to his, we have:—

Fig. 7.

Two sisters, *a*, *a*, their ⋮ ⋮ Children, A, *a*, are of same class = tribal brother and sister = unmarriageable.	Two brothers, A, A, their ⋮ ⋮ Children B, *b*, are of same class = tribal brother and sister = unmarriageable.	Brother and sister, A, *a*, their ⋮ ⋮ Children B, *a*, are of different class = tribal cousins = marriageable.

Having come to this point, it seemed to me that I had seen something like it elsewhere, and on looking back to "Kamilaroi and Kurnai" I found that Fison had thus worked out the origin of the Turanian classificatory system, as Morgan calls that including the above-mentioned systems of North America and India, with others. Fig. 8 puts concisely the main features of the argument as to a man's kin.

Fig. 8.

His

father's brother's child
or
mother's sister's child } is (tribal) brother or sister,

Therefore

father's brother is (tribal) father,
mother's sister is (tribal) mother,

His

father's sister's child
or
mother's brother's child
} is tribal (cousin).

Therefore

father's sister is (tribal) aunt,
mother's brother is (tribal) uncle.

Though not proposing to enter fully into the deduction of classificatory relationships in all their varieties from the rule of exogamy, it is necessary to point out that the form of exogamy here contemplated is the simplest or dual form, in which a people is divided into two intermarrying classes. Systems of exogamy which are dual in their nature, that is, consisting of two classes or groups of classes, stand in direct connection with cross-cousin marriage and classificatory relationship. But if the number of exogamic divisions is not dual, if there are for instance three clans, and a man of one clan may take a wife of either of the other two clans, it is readily seen that the argument of fig. 7 breaks down. Although at present only prepared to deal with exogamy and classificatory relationship in their dual form, I may notice that the treatment of the problem by the method of adhesions strengthens the view, not wanting in other evidence, that the dual form of exogamy may be considered the original form. In reckoning from the present schedules the number of peoples who use relationship names more or less corresponding to the classificatory systems here considered, they are found to be fifty-three, and the estimated number of these which might coincide accidentally with exogamy were there no close connexion between them, would be about twelve. But in fact the number of peoples who have both exogamy and classification is thirty-three, this strong coincidence being the measure of the close causal connexion subsisting between the two institutions. The adherence is even stronger as to cross-cousin marriage, of which twenty-one cases appear in the schedules, no less than fifteen of the peoples practising it being also known as exogamous. Here, indeed, the relation is not one of derivation, but of identity, the cross-cousin rule being actually a partial form or imperfect statement of the law of exogamy itself. Such adhesions between two or more customs have been already recognised as proving the existence of causal connexion, but it has now to be pointed out that they serve another purpose. The

connexion, when proved, reacts on the evidence by which it was proved. When once it has been shown that cross-cousin marriage is part and parcel of exogamy, it may be argued that all the twenty-one peoples practising cross-cousin marriage are to be set down as exogamous. Now as only fifteen of them are expressly recorded to be so, the list of exogamous nations of the world has to be increased by six. So, classificatory relationship being evidence that the peoples practising it are or have been exogamous, this will add some twenty more to the list of nations among whom further investigation will probably disclose record that exogamic society once prevailed or still prevails. Even if no direct record is forthcoming, the indirect proof may with due caution be sufficient for placing them in the exogamous group, which may thus number above one hundred peoples out of the three hundred and fifty of the world. Those who remember the sharp discussion between McLennan and Morgan years ago, and the view that the classificatory relationships were a mere system of addresses, will be struck with the way in which the controversy is likely to end. For myself I hardly know whether I feel more glad or sorry that my old friend McLennan to the day of his death never knew that Morgan and he, who believed themselves adversaries, were all the while allies pushing forward the same doctrine from different sides.

It thus appears that the number of nations who have the system of intermarrying clans is larger than has been known. But even this by no means measures the full importance of exogamy as a factor in the constitution of society. Anthropologists have long had before them the problem of determining how far clan-exogamy may have been the origin of the prohibited degrees in matrimony so variously defined in the laws of nations. The yet larger problem has been opened, how far laws of permission and prohibition of marriage may have led nations to define relationships and give them names, distinguishing for instance uncles from fathers, and cousins from brothers. It may, I think, conduce to the solution of these problems to notice two ways in which the collation of the present tables bears on the meaning and origin of exogamy.

There are conditions of society under which exogamy is found side by side with wife-capture, so that a barbaric marriage often involves both in one and the same act, as when a Tatar and a party of his friends, all armed to the teeth, ride off to the tents of a distant clan, and thence with simulated or even real violence carry off a bride. But on reckoning up the peoples among whom this combination of capture and exogamy is found, the number, though enough to show that they co-exist freely, falls short of what would justify the inference that they are cause and effect.

Moreover, it appears that this co-existence belongs especially to the paternal stage of society, and to the maternal-paternal, in which paternal influence is partly established. This is intelligible enough from what has been already said as to the effect of capture in setting on foot paternal institutions, from its very outset, by bringing the wife into the husband's hands and home. We are thus led to a more fundamental test of the position of exogamy, by enquiring whether it existed in that earliest known stage of the maternal system of society, where the husband lives in the wife's family. The schedules show that there are in different parts of the world twelve or thirteen well-marked exogamous peoples whose habit of residence is for the husband to join the wife's family.[1] This state of things seems to me to prevent our regarding exogamy as a result of capture, it being plain that the warrior who has carried a wife captive from a hostile tribe does not take up his abode in her family. If capture leads to any form of exogamy, this must, I think, be a paternal form, and if it be admitted that the maternal form is earlier, then it follows that capture is inadmissible as the primary cause of exogamy.

More than twenty years ago, in compiling a list of nations practising this custom of marrying out of the tribe or kin, I noticed that in any full discussion of the subject would have to be considered the wish to bind different tribes together in friendship by intermarriage.[2] Compiling the present tables has brought together observations to this effect. Morgan, describing how the alliance of the Iroquois tribes, made up of intermarrying clans, formed a bond of union throughout the national league, writes: "It was the boast of the Iroquois that the great object of their confederacy was peace; to break up the spirit of perpetual warfare, which had wasted the red race from age to age."[3] Another group of North American tribes, the Tinneh, on the Arctic circle, are divided into three castes, their rule being that, for instance, a Chit-sangh may not marry a Chit-sangh. When this does take place, the persons are ridiculed and laughed at, the man is said to have married his sister, even though she may be from another tribe, and there be not the slightest connection by blood between them. Hardisty, who gives these details, remarks:—"One good thing proceeded from the above arrangement, it prevented war between two tribes who were naturally hostile."[4] The Bogos of Abyssinia are exogamous, and of

[1] Kasia, Garo, Menangkabau and Padang, Banks Islands, Mortlock Islands, Chiroki, Delaware, Iroquois, Mandan and Minitari, Moqui, Tlinkit, Arawak.
[2] "Early History of Mankind," p. 286.
[3] Morgan, "League of the Iroquois," p. 91.
[4] "Smithsonian Report," 1866, p. 315.

them Munzinger reports that they are closely bound together by reciprocal marriages, "so that internal war is almost impossible. Blood-quarrels among the Bogos are always settled very quickly, whilst the smallest collision with the adjoining tribes leads to everlasting wars."[1] Du Chaillu writes of Ashango-land, "tribes and clans intermarry with each other and this brings about a friendly feeling among the people. People of the same clan cannot intermarry with each other."[2] Thus, it seems that when Plutarch asks in the "Roman Questions," "Why do they not marry women near of kin?" he has some reason in setting down as one possible answer, "Whether from their wishing to increase friendships by marriages, and to acquire many kinsfolk, giving wives to others and receiving (wives) from them."[3]

On looking at the distinction between endogamy and exogamy from this point of view, it will be seen that there is a period in the growth of society when it is a political question of the first importance. While the vast forest or prairie still affords abundant food for a scanty population, small hordes may wander, or groups of households may be set up, each little tribe or settlement cut off from the rest, and marrying within its own border. But when tribes begin to adjoin and press on one another and quarrel, then the difference between marrying-in and marrying-out becomes patent. Endogamy is a policy of isolation, cutting off a horde or village, even from the parent-stock whence it separated, if only a generation or two back. Among tribes of low culture there is but one means known of keeping up permanent alliance, and that means is intermarriage. Exogamy, enabling a growing tribe to keep itself compact by constant unions between its spreading clans, enables it to overmatch any number of small intermarrying groups, isolated and helpless. Again and again in the world's history, savage tribes must have had plainly before their minds the simple practical alternative between marrying-out and being killed out. Even far on in culture, the political value of intermarriage remains. "Matrimonial alliances increase friendship more than aught else," is a maxim of Mohammed. "Then will we give our daughters unto you, and we will take your daughters to us, and we will dwell with you, and we will become one people," is a well known passage of Israelite history.

Exogamy lies far back in the history of man, and perhaps no observer has ever seen it come into existence, nor have the precise conditions of its origin yet been clearly inferred. Even the

[1] Munzinger, "Sitten und Recht der Bogos," p. 10.
[2] Du Chaillu, "Journey to Ashango-land," p. 427.
[3] "Plutarch, Quæst. Rom.," cviii.

historical relation between exogamy and the system of classes known as totemism is not fully cleared up; whether as Prof. Robertson Smith takes it,[1] totemism supplied the necessary machinery for working a law of exogamy, or whether exogamy itself led to totemism. But as to the law of exogamy itself, the evidence shows it in operation over a great part of the human race as a factor of political prosperity. It cannot be claimed as absolutely preventing strife and bloodshed, indeed, it has been remarked of some peoples, such as the Khonds and the Banks Islanders, that the intermarrying clans do nevertheless quarrel and fight. Still by binding together a whole community with ties of kinship and affinity, and especially by the peacemaking of the women who hold to one clan as sisters and to another as wives, it tends to keep down feuds and to heal them when they arise, so as at critical moments to hold together a tribe which under endogamous conditions would have split up. Exogamy thus shows itself as an institution which resists the tendency of uncultured populations to disintegrate, cementing them into nations capable of living together in peace and holding together in war, till they reach the period of higher military and political organisation. Seen from this point of view, the remarkable fact is more easily understood that exogamy, passing on from the maternal to the paternal stage of society, shifts its prohibitions from the female to the male line of descent, now allowing marriages which it treated formerly as incestuous, while prohibiting others which it formerly allowed without scruple. This transformation has been taking place within recent times among Malay and American tribes, and seems to be even going on still, it making no difference politically whether kinship follows the female or male line, if only marrying-out causes the requisite intermixture of the clans. In this connexion it is worth while to notice that there are a small number of peoples in different parts of the world, who have a rule of exogamy not depending on kinship at all. For instance, Piedrahita[2] relates of the Panches of Bogota, that those of one town did not marry any woman thereof, as all held themselves brothers, and the impediment of kinship was sacred to them, but such was their ignorance that if a sister were born in a different town from her brother, he was not prevented from marrying her. An anthropologist, with the list before him of the peoples who prohibit a man from marrying in his own village, might explain this not as a result of ignorance, but as an extreme case of what may be called "local exogamy."

[1] W. Robertson Smith, "Kinship and Marriage in Early Arabia," p. 184.

[2] Piedrahita, "Historia General de las Conquistas del Nuevo Reyno de Granada," 1688, page 11.

The results here brought forward make no approach to exhausting the possible inferences to be drawn from the tables. These need not even be confined to working out the development of customs found in existence somewhere on the globe, but may in some measure restore the knowledge of forms of society now extinct. Interesting, however, as these problems are, I am more anxious to bring under discussion the method by which they are here treated, how imperfectly I am well aware. The interpretations offered will have to be corrected, the tabulated material improved in quantity and quality, and the principles it involves brought out more justly, yet at any rate it will remain clear that the rules of human conduct are amenable to classification in compact masses, so as to show by strict numerical treatment their relations to one another. It is only at this point that speculative explanation must begin, at once guided in its course and strictly limited in its range by well-marked lines of fact to which it must conform. The key of the position is, as that veteran anthropologist, Prof. Bastian, of the Berlin Museum, is never weary of repeating, that in statistical investigation the future of anthropology lies. As soon as this is systematically applied, principles of social development become visible. Even the diagrams of this paper may suffice to show that the institutions of man are as distinctly stratified as the earth on which he lives. They succeed each other in series substantially uniform over the globe, independent of what seem the comparatively superficial differences of race and language, but shaped by similar human nature acting through successively changed conditions in savage, barbaric, and civilised life.

The treatment of social phenomena by numerical classification will, it must be added, react on the statistical material to which the method is applied. It is in classifying the records of tribes and nations that one becomes fully aware of their imperfect and even fragmentary state. The descriptions happily tend to correct one another's errors, but the great difficulty is blank want of information. As for extinct tribes, and those whose native culture has been re-modelled, there is nothing to be done. But there are still a hundred or more peoples in the world, among whom a prompt and minute investigation would save some fast vanishing memory of their social laws and customs. The quest might be followed up internationally, each civilised nation taking in hand the barbaric tribes within its purview. The future will, doubtless, be able to take care of itself as to most branches of knowledge, but there is certain work which if it is to be done at all, must be done by the present.

Discussion.

The President felt sure that no one would have appreciated Dr. Tylor's memoir more justly, or would have welcomed it more warmly, than Mr. Herbert Spencer, whose efforts to erect a science of sociology upon an inductive basis were well known. Mr. Spencer, as we all remember, went to great cost, and much exerted himself to obtain a collection of the customs of all available nations, savage and civilised, arranged in an uniform and orderly manner for purposes of intercomparison. The result was the publication of an amount of material that filled four very large folio volumes. Unfortunately he had been obliged to delegate to others the task of compilation, and the work was not carried out as accurately as was desirable, or even as completely, notwithstanding its bulk. Much the same may be said of another and a different collection. Dr. Tylor has, on the contrary, collected a mass of well sorted and highly considered information, by means of a sustained and scholarly investigation, extending over many years, and there could be little doubt that a publication of his compact notes, supplemented it might be by the notes of other anthropologists, would be of itself a most valuable and acceptable work. Dr. Tylor's memoir dealt both with a method and with conclusions; it was of the method only that he (Mr. Galton) would now speak. It consisted in ascertaining the degree in which the concurrence of certain customs was exceptionally frequent. He thought that the degree of interdependence, to which the various degrees of exceptional frequency testified, might with advantage be expressed in terms of a scale, in which 0 represented perfect independence, and 1 complete concurrence. By doing so, the values of the various concurrences would become more clear. As an example of what he meant, he would refer to a scale used in certain psycho-physical inquiries and discussed in Fechner's book, where the true significance of the various percentages of success and failure was tabulated.

It was extremely desirable for the sake of those who may wish to study the evidence for Dr. Tylor's conclusions, that full information should be given as to the degree in which the customs of the tribes and races which are compared together are independent. It might be, that some of the tribes had derived them from a common source, so that they were duplicate copies of the same original. Certainly, in such an investigation as this, each of the observations ought, in the language of statisticians, to be carefully "weighted." It would give a useful idea of the distribution of the several customs and of their relative prevalence in the world, if a map were so marked by shadings and colour as to present a picture of their geographical ranges.

Professor Flower remarked upon the great value of Dr. Tylor's paper, congratulating him on the application of a rigid statistical method to a research which had generally been conducted on vague

and uncertain lines. It was, however, perfectly obvious that the value of such a method depended entirely upon the units of comparison being of equivalent value, and this seemed to him to be a very great difficulty when dealing with groups of mankind. He had, however, no doubt that Dr. Tylor had taken every means in his power to eliminate the errors which might arise from this source.

Mr. G. Bertin, after remarking that this paper would do a great deal to elevate anthropology, said he thought that, if Dr. Tylor had included in his diagrams one illustrating the primitive state of society in which women were the common wives of the clan or tribe, it would explain everything. This state of things still exists in some parts of Tibet, and traces of it are detected in Ancient Egypt and among the primitive Semites. Women were at first considered like other properties, and in the communist stage they used to belong to each and all; when property was divided women were assimilated to landed properties or estates, and the children took the name of their mother, as in feudal countries they took that of their estate. This is really the origin of the so-called matriarchate, in which the mother had, in fact, no power, but gave her name to her child. It is only with progress and civilisation that the position of women was raised till it tends in our modern times to place them on equal footing with men.

Sir G. Campbell agreed with a preceding speaker that the maternal system does not mean the rule of the female, but only that she is used as the family seed-bed. And he would very much like to obtain information on one point in the history of marriage, viz., who invented or how came about the very peculiar system of monogamy, so prevalent among all Aryan races, and under which a man is not only confined to one wife, but tied to her by indissoluble bonds. The maternal system we understand, under which the women of a family are the brood mares of their own family; the patriarchal system we understand, under which a man rules over his wives, slave girls, and children. and exchanges the former for others when he thinks fit. But the sacramental monogamous marriage, by which a man is tied to one wife for ever, (among the Hindoos the wife is tied to him even beyond the grave), that is very peculiar, and he had never seen it accounted for.

Mr. Bouverie-Pusey remarked that Dr. Tylor's views on the origin of exogamy derived confirmation from an old Hungarian law, according to which the Ishmaelites (Tartars converted from Islam) were commanded to give all their daughters in marriage to Hungarians, and to take none but Hungarian wives for their sons, obviously to prevent their continuing to form a separate nationality.

Dr. Tylor congratulated himself on having been able to place the present method before investigators whose criticism was of such

importance, from their thorough appreciation of the points in which such a method has inherent weakness. With the details as yet in an imperfect state, he found it difficult to bring out the results except as a temporary step, which is, however, on the road to permanent settlement. The difficulty raised by Mr. Galton that some of the concurrences might result from transmission from a common source, so that a single character might be counted several times from its mere duplicates, is a difficulty ever present in such investigations, as for instance in the Malay region, where groups of islands have enough differentiation in their marriage systems to justify their being classed separately, though traces of common origin are at the same time conspicuous. The only way of meeting this objection is to make separate clsssification depend on well marked differences, and to do this all over the world. With regard to Professor Flower's caution as to the units of comparison, an answer of somewhat the same kind might be given. When a community or group of communities follows a law of marriage and descent substantially similar, this may be taken as a unit, notwithstanding historical connection and the consequent partial correspondence which may exist between it and other unit systems. If this method be fairly and equably worked over the world, the correspondences brought about by historical connexion tend to set off against one another, leaving the results of general human action more or less clear.

Dr. Tylor added that he had collected much material bearing on the great problem raised by Sir George Campbell, but at present without any result sufficiently definite to be brought forward.

NOVEMBER 27TH, 1888.

FRANCIS GALTON, Esq., F.R.S., *President, in the Chair.*

The minutes of the last meeting were read and signed.

The following elections were announced:—Rev. LORIMER A. FISON, of Flemington, Melbourne, Australia, as an honorary member; Mrs. C. A. FRASER, of 10, Craven Hill, Hyde Park; HENRY BALFOUR, Esq., B.A., of the Anthropological Department of the University Museum, Oxford; and H. HAVELOCK ELLIS, Esq., of Earlsbrook Road, Redhill, as ordinary members.

The following presents were announced and thanks voted to the respective donors:—

Notes on the Modern Survival of Ancient Amulets Against the Evil Eye
Author(s): E. B. Tylor
Source: *The Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 19 (1890), pp. 54-56
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while a narrower band was attached to it at right angles, as if to pass over the top of the skull. Thus the pressure would be either upon the forehead, or at the opposite side of the skull. Mr. Read did not remember to have seen any skulls from Borneo so deformed.

The following note was then read by the Secretary:—

NOTE *on the use of* "ELK" TEETH *for* MONEY *in* NORTH AMERICA.

By HENRY BALFOUR, ESQ., M.A., F.Z.S.

AMONG the various natural objects described as passing for currency in different savage races, I have not seen it recorded that "Elk" teeth are so used by natives of North America. This particular form of money consists of the canine or "eye" teeth of the Wapiti (*Cervus Canadensis*, Schrab), which goes by the name of "Elk" in those regions. The canines are alone used, and of these there are but two in each animal. They pass as currency amongst the Shoshone and Bannock tribes of Idaho and Montana, and probably, no doubt, other tribes also; passing as a substitute for coin amongst the natives themselves, and not between Natives and Whites. They represent at present a value of 25 cents of American money; but, with the increasing scarcity of Wapiti, it is reasonable to suppose that the value will rise, if these teeth retain their function as currency. There being considerable difficulty in obtaining a quantity of these products of hunting, and from the fact of each animal only supplying two canines, it is easy to see that a definite value can be set upon such trophies, and how they may have passed into a recognised form of currency. As is so frequently the case with savage money, these "Elk" teeth are used as ornaments; they are frequently pierced with a small hole, and sewn on to clothes, pouches, &c., to form decorative trimmings. I am indebted to my friend, Mr. J. W. Young, for specimens (some of which are exhibited), as well as for information concerning them.

NOTES *on the* MODERN SURVIVAL OF ANCIENT AMULETS AGAINST *the* EVIL EYE.

By E. B. TYLOR, Esq., D.C.L., F.R.S., V. P. Anth. Inst.

Dr. TYLOR exhibited a series of the brass ornaments hung to the harness of cart and waggon horses in England, and called by saddlers "face-brasses." In the course of collecting amulets against the evil eye, he had received by the kindness of Mr. Neville Rolfe, of Naples, a set of brass harness-ornaments, including crescent moons, there used avowedly for this purpose. The correspondence of these with the brass crescents (with and

without a star or sun) which are still used in England, and with others in South-eastern Europe, proves conclusively that they are all evil-eye charms, the Latin *phaleræ*. The old English crescents already mentioned indeed match those represented on Trajan's column and other monuments. Taking this form as the beginning of the English series, and as having survived into our own time, it can be traced through a series of modern degradations consequent on loss of meaning, into mere ornaments decorated with a horse's head, a beer barrel, or a portrait of the Queen.

Dr. Tylor went into some evidence as to the origin of the moon-symbol in ancient magic, and hoped to be able to treat the subject methodically in a future paper.

DISCUSSION.

Mr. G. M. ATKINSON remarked that for some years back he had collected and drawn some 300 different forms of these horse decorations. He divided them roughly, first, into two classes—*Marks of Ownership*, as shields, crests, monograms, trade marks, &c.; and *Symbols*, the most important, and the commonest of these being a flat disc on the top of the head between the ears, which represents the sun, and a crescent on the forehead, for the moon. These are combined with stars, national emblems (as rose, shamrock, and thistle), acorns, hearts, lion, horse, and horse-shoes. A great variety of such forms combined still survive. These are also worn on the breast of the horse, on the martingale, generally in odd numbers, 3, 5, or 7, and are found also on the sides, usually on the left side just behind the shoulder. On the top of the head, smaller, but similar, symbols are found, the most frequent being little swinging bells; these are called "flyers," and tufts of hair are sometimes attached to them. The crescent form is also used on the harness of camels and elephants. It is found with the Roman antiquities in the British Museum, and in Mediæval times, in the Nativity groups, tapestries, and pictures, &c. Mr. Atkinson hopes to exhibit his collection of sketches at some future meeting of the Institute.

Mr. W. GREATHEED thought the cresent-moon ornament might be referred to the cult of Diana believed to have been carried on up to a late date on the site of the present St. Paul's Cathedral.[1] If Diana was also the great huntress, huntsmen and others, to whom horses were valuable auxiliaries, would be likely to place them under Diana's protection by the use of her symbol. In the

[1] "Some have imagined that a temple of Diana formerly stood here, and when I was a boy, I have seen a stag's head fixed upon a spear (agreeably enough to the sacrifice of Diana) and conveyed about within the church with great solemnity and sounds of horns. And I have heard that the stag which the family of Bawd in Essex were bound to pay for certain lands used to be received at the steps of the church by the priests in their sacerdotal robes and with garlands of flowers on their heads. Certain it is this ceremony savours more of the worship of Diana and of Gentile errours than of the Christian religion." Camden's "Brit. Middlesex." *See too* Dean Milman's "History of St. Paul's." —W. G.

circle of worshippers this would ensure for them a general care and attention which would tend to avert the "evil eye," that is a secret malicious injury and even the premeditative gaze of the designing culprit.

Mr. WALTER COFFIN thought that if no other origin were known for the prophylactic virtues so commonly attributed to the horse-shoe, the close resemblance in form to the larger specimens exhibited of the models of conventional lunar crescents might suggest the possibility of some relation between very similar uses.

Mr. C. H. READ did not think that the frequent occurrence of the crescent upon horse-trappings could be held to connect the horse with Diana, as being sacred to that goddess, at least in the absence of some more direct evidence. Referring to a figure which Dr. Tylor had drawn upon the board, Mr. Read remarked that it seemed to represent the boat of the Egyptian Rā, or the sun, the boat being somewhat of the gondola form, with the flat disc of the sun standing in the middle. There did not seem to be any intention to represent the crescent moon under the form of a boat. Mr. Read deprecated the formation of a theory of evolution upon the evidence of so limited a series of these modern phaleræ, and one in which so many of the intervening links were entirely wanting.[1]

Mr. WALLHOUSE subsequently sent the following note:—

"With regard to the moon-shaped amulets against the evil eye described by Dr. Tylor at the meeting of March 12th, it may be mentioned that lunulæ or crescents formed of thin plates of metal, sometimes gold, are worn by children on the western coast of India, suspended upon the breast with the points upwards. Also respecting the 'Phœnician hand,' that symbol is used by Mussulmans throughout Southern India: impressions in red paint of a hand with outspread fingers are everywhere to be seen upon the walls of mosques, masjids, and Mussulman buildings. Standards, too, in the shape of hands, to which are given the names of Mohammedan martyrs, are carried in procession at the Mohurrum festival. In Ireland an arm and hand appear on the armorial bearings of the very ancient family of O'Sullivan, and an oath by the 'hand of O'Sullivan' is not to be broken by any one of the name; the old legend of the family runs:—

'Nulla manus
Tam liberalis,
Atque generalis
Atque universalis,
Quam Sullivanis.'

The figures of a mermaid and a galley appear with the hand on the armorial bearings, and the old family names refer to the sea and navigation, possibly pointing to a Phœnician origin."

The following paper, illustrated by the exhibition of specimens and sketches, was then read by the Author:—

[1] Some interesting references to the use of crescent ornaments on animals, &c., will be found in "Archæol. Journal," Vol. xvii, p. 146.—C. H. R.

Remarks on Totemism, with Especial Reference to Some Modern Theories Respecting It
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REMARKS ON TOTEMISM, WITH ESPECIAL REFERENCE TO SOME MODERN THEORIES RESPECTING IT.

By Edward B. Tylor, D.C.L., F.R.S., Professor of Anthropology in the University of Oxford.

It is desirable that I should state the purpose of my offering these remarks on Totemism. Though I have written very little about it, my first lines date as far back as 1867, and a little later I came to be well acquainted with J. F. McLennan, the beginner of the systematic study of this and kindred branches of anthropology. At that time he was engaged on his papers on *Worship of Animals and Plants*, and we had much conversation on the philosophy of totems. The cause of my holding aloof from published discussions of the subject since has been a sense of its really bewildering complexity, coupled with the expectation that further research among the races of the lower culture would clear its outlines, as indeed has been to some extent the case, especially in North America and Australia, the regions where totemism proper is most at home. The particular cause of my drawing up the present paper was my being invited to address a philosophical society meeting in Oxford under the presidency of Professor Sanday, the subject assigned to me being certain views on the anthropology of religion contained in the works of Mr. J. G. Frazer and Dr. F. B. Jevons. Whatever my hearers may have learnt from my remarks, at any rate I became aware that the time had come for a closer examination than seems to have been hitherto made as to the somewhat various and vague ideas which have become associated with the term totemism. It was evident that till this was done, it would not even be possible to ascertain what place the totem may properly claim to occupy in the theory of religion. My having undertaken to describe the great Totem-Post at Fox Warren, made the present a suitable occasion for bringing the general principles which this monument illustrates under the consideration of the Anthropological Institute. It will be needful for me to dissent from some current views and, what is of more consequence than such critical objections, to draw attention to the confusion in terms and definitions in use, which interferes with distinct reasoning. May I say that as time prevents any attempt at fully arguing out the problems raised, all I positively undertake at present is to bring forward evidence showing that particular conclusions are not really settled, and cannot be without further discussion.

When McLennan in 1865 published his *Primitive Marriage*, his interest in totems was merely incidental to his study of exogamy. The North American

totem animal only comes in as furnishing the family name which classified clanship within whose limits marriage is forbidden, and though Sir George Grey had previously called attention to the close similarity between the kobong-clans of West Australia and the totem-clans of North America, McLennan in referring to him only attends to the question of intermarriage. It was in 1869 that the conception of totemism took shape in McLennan's mind as a great principle, one may even say the great principle of early religion, as well as early society. As his articles on the "Worship of Animals and Plants" in the *Fortnightly Review* in 1869–70 furnish the outsets of most of the lines along which the theory of totemism has been carried on to this day, as well as of some of its turns which have obstructed progress, a brief indication must be given of the tenour of these remarkable papers.

McLennan begins: "The subjects of the inquiry are totems and totem-gods, or, speaking generally, animal and vegetable gods." The order of the exposition, he continues, is to explain what totems are, and what are their usual concomitants; to throw light on the intellectual condition of men in the totem stage of development: to examine the evidence that mankind in prehistoric times came through the totem stage, having animals and plants, and the heavenly bodies conceived as animals for gods before the anthropomorphic gods appeared; and to reach the conclusion that the hypothesis of the ancient nations having come through the totem stage is sound. Now McLennan was quite aware of what goes to make a totem in North America, that it involves the division of tribes into totem-clans each with its proper totem-animal, and the rule of exogamy forbidding marriage within the clan so as to necessitate intermarriage between clans; the totem-animals being also regarded as kinsfolk and protectors of the clansmen, who respect them and abstain from killing or eating them. Such totems, he remarks, prevail among two distinct groups of tribes, the American Indians and the aborigines of Australia, and it may be believed that many more instances of their prevalence will be brought to light. I mention this to show that he started with a distinct idea of what may be called totemism proper, with its division of tribes into clans allied to species of animals, etc., between whom and the men there were rules of marriage, protection, and respect. It will now be seen how, starting from this totemism proper, McLennan proceeded to take in with it other kinds of animal and plant worship, and to form the result into an expanded doctrine which he continued to call totemism.

In order to understand McLennan's argument, its starting point has to be found in a narrative by J. Long, a trader and interpreter among the North American Indians in the last century. Of the Chippeways (Ojibwas), Long writes, that one part of the religious superstition of the savages consists in each of them having his *totam*, or favourite spirit, which he believes watches over him. This totam they conceive assumes the shape of some beast or other, and therefore they never kill, hunt, or eat the animal whose form they think this totam bears.

One of the Indians, whose totam was a bear, dreamt (it seems) that he went to a piece of swampy ground about five days' march from Long's wigwam, and saw a large herd of elks, moose and other animals. He went accordingly, and seeing the animals he had dreamed of, fired and killed a bear. Shocked at the transaction, and dreading the displeasure of the Master of Life, whom he conceived he had highly offended, he fell down and lay senseless for some time; recovering from his state of insensibility he got up and was making the best of his way to Long's house when he was met in the road by another large bear, who pulled him down and scratched his face. The Indian relating this event, at his return, added in the simplicity of his nature that the bear asked him what could induce him to kill his totam, to which he replied that he did not know he was among the animals when he fired at the herd, that he was very sorry for the misfortune and hoped he would have pity on him; and that the bear then suffered him to depart, telling him to be more cautious in future, and to acquaint all the Indians with the circumstance, that their totams might be safe and the Master of Life not angry with them. As he entered my house, Long continues, he looked at me very earnestly and pronounced these words: "*Amik hunjey ta Kitchee Annascartiosey nind O Totam cawwicka nee wee geossay sannegat debwoye,* or "Beaver! (Long's Indian name) my faith is lost, my totam is angry, I shall never be able to hunt any more."[1]

McLennan's comment on this story is as follows: "Should one be surprised to find that admonitory bear of the man's imagination worshipped as a god further on in the history of Bear tribes advancing undisturbed by external influences, correlated with the Master of Life in the Olympus, or even preferred to, or identified with him?" On examination, however, I venture to think that neither can the trader-interpreter's account be accepted as correct, nor taken as a foundation for the hypothesis of the development of totem-animals into great deities which the anthropologist builds upon it. Long evidently mixed up two articles of Ojibwa belief which are quite distinct. He knew the word *totem* (*ot-otc-m*=his *otc*, clan-name or clan-animal) and indeed his book very likely introduced the word into European language; also he knew of the rule against killing or eating the totem-animal. But his book shows no sign of his having learnt the system of the Ojibwa clan, without which knowledge he would not understand how the totem-species of animal was common to the clan as a whole. When he describes it as a favourite spirit which watches over each Indian, he evidently confuses it with the guardian spirit in animal form, which the individual Ojibwa also had, and called not his *totem* but his *manitu* or spirit, in trapper's jargon his *medicine*. Then, as to the particular story in question, how does it prove that the imaginary bear, who, as the Indian declared, scratched his face and gave him a warning from the Master of Life, was a being in course of development into a god to rival or become the Master of Life himself? It has to be noted as to these Ojibwas, that far from

[1] J. Long, *Voyages and travels of an Indian Interpreter and Trader.* London, 1791.

their religion "advancing undisturbed by external influences," it had really superposed on the old native beliefs the Jesuit missionary teaching, especially as to this *Master of Life*, who was so distinctly the Christian Deity that, as Long more than once mentions, the Indian name for a Roman Catholic priest was *Master of Life's man*. Not only do we find a development hypothesis of deities read into a story which does not contain it, but the whole account is a warning of the risk of uncontrolled theory as to divine evolution. From an angry bear in the backwoods to a supreme deity of the world is too long a course to be mapped out in merely ideal stages.

In following out McLennan's original and suggestive if inconclusive attempt to interpret the great gods of the world as evolved from the humbler rank of totem-animals, it has to be noticed how other evidence of animal-worship had to be dealt with in order to people the Totem Olympus with totem-gods of superior tribes. In order to make a place for the Natchez Indians of Florida, who claimed to be descended from the sun, and were called suns accordingly, and took wives only from other clans, the fundamental idea of a totem-creature as one of a species is dropped without scruple, and these people are incorporated as totemists whose totem was the sun. Another great province of religion is annexed by a theory that gods who have their incarnations or embodiments in species of sacred animals may be considered as deities evolved from these animals as totems. For examples, the highest Fijian deity is Ndengei, whose shrine is the serpent, and second to him is Tui Lakemba, who claims the hawk as his shrine, this claim being indeed disputed by another god who claims the hawk for himself. One god is supposed to inhabit the eel, wherefore the worshipper of the eel-god must never eat eels. The sacred animal receives food and reverence in the name of his god; when a land-crab comes to the island of Tiliva, where he is sacred, but now seldom seen, presents are made to him lest his god should bring drought or death on the islanders. On these statements, derived from the *Fiji and the Fijians* of Thomas Williams, McLennan comments thus:—"These gods are tribal, and no one can doubt but they are totems who have made such progress as we above suggested the Bear might make, and are become the objects of a more or less regular worship—the Serpent tribe dominant, and the Hawk tribe in the second place." Yet considering that there is no evidence of totems or totem-clans proper in Fiji, this conjecture which "no one can doubt" is one which no one need believe. Indeed, if it is assumed that every sacred animal is a totem and every group of worshippers a totem-clan, this is to contradict McLennan himself, who in a passage close by defines totemism as fetishism plus exogamy and maternal descent, a definition which is in great measure throwing up his case. Such want of consistency shows that the whole *Fortnightly Review* essay is rather to be treated as an introductory speculation than as a system. It should be remembered that its author thought well to insert a note to the effect that he only submitted an hypothesis which even if it failed would be useful in dealing with the evidence. What is still more to the purpose is that he never reprinted these articles, though he spent

much time in his later years in gathering further materials bearing on the question. Necessary as they are to every student of the subject, it is satisfactory that they are now published in the supplementary volume of his works.[1] But it would not be needful to criticise their details so many years after date, were it not that McLennan's authority has had weight enough to induce modern writers to repeat even his conjectures as established principles.

Mr. J. G. Frazer's little manual of Totemism[2] is as a classified collection of evidence of permanent value to Anthropology. The writer treats totems under three heads, the *clan-totem*, common to a whole clan; the *sex-totem*, an Australian variety; and the *individual-totem*, belonging to a single person and not hereditary. But the clan-totem being the most important, he explains that when totems and totemism are mentioned without qualification, the clan-totem is always referred to. Now it has been just mentioned how McLennan, when writing on animals, etc., in which Fijian gods become incarnate, treats these as equivalent to totems, with which in fact they have but a partial and doubtful analogy. Mr. Frazer not only follows this line of reasoning, but carries it further. His chief authority is Dr. Turner's *Samoa*.[3] This book is familiar to me (in fact I wrote the preface to it), so that I was puzzled to read passages cited from it by Mr. Frazer, as to totems and clans connected with them, such being as foreign to Samoan as to Fijian institutions. Thus it is stated that the Samoans thought it death to injure or eat their totems, for the totem would take up his abode in the sinner's body till it caused his death; if a Turtle man ate of a turtle, he grew very ill and the voice of the turtle was heard in his inside, saying, "he ate me, I am killing him." It is related as from Dr. Turner, that when among the cuttle-fish clan an offence of this kind had been committed, the clan met and chose a person to go through the pretence of being baked as an expiation. But on reference to the original passages in Dr. Turner's book, it will be found that neither totems nor totem-clans are there, either by name or description. It was a family god who said from within the body of the offending turtle-eater, "I am killing this man, he ate my incarnation." As to the cuttle-fish, it was as a household god, that is, a god selected for one or more members of a family at their birth, that he was appeased by the ceremony of a human victim being baked in a cold oven. From these and other cases it appears that Mr. Frazer had so framed his mind on McLennan's theory, as to feel justified in altering the very terms of the account of Samoan religion, in order to make them fit with it. Yet Dr. Turner is an authority of the first class, and his understanding of the Samoan theology is confirmed by the *Samoan Texts* of Dr. Stübel.[4] The doctrine of totem-animals and the doctrine of incarnation-animals no doubt both belong to the general theory of animal worship, but it does not follow

[1] J. F. McLennan, *Studies in Ancient History*. Second Series, Appendix, 1896.

[2] J. G. Frazer, *Totemism*, 1887.

[3] G. Turner, *Samoa*, 1884.

[4] O. Stuebel, *Samoanische Texte*, Veröffentlichungen aus dem K. Museum für Völkerkunde, Berlin, 1895.

that a species of animals allied to a clan of men is to be regarded as the same as a species of animals inhabited by a god. Yet the theory of development of gods from totems has its chief support in the Fijian and Samoan gods, who, it is taken for granted, were thus invented out of their own sacred animals.

Let us test the value of such an assumption by the example of the great Malayo-Polynesian heaven-god Tangaloa, known from the Indian Archipelago down to New Zealand, and of whom the widespread myth is told of his creating the earth with the aid of his daughter, Turi the snipe. In Samoa he is called Tangaloa langi or Tangaloa of the Sky, and he becomes incarnate in the snipe as his sacred creature. Therefore, according to the totem-theory we are now discussing, this Polynesian Jupiter, as he has been called, may be set down as a highly developed snipe. Indeed, the theory has no limit in a religion in which any priest of authority need only give out that his god will appear in a rat or an eel, for rats or eels to be established as his incarnations, and claimed by European theorists as totems from which the god himself arose in days of old.

In arguing against premature conjectures as to the origin of deities, I am anxious that the investigation of causes tending in this direction should not be restricted. The development of ideas of deity in early religion is but imperfectly understood, and so far as known seems to have resulted from various and complex causes. Among such it is necessary to consider the tendency of mankind to classify out the universe, supposing each class of objects or actions to be under the headship of a mythical being of suitable rank, its ancestor, creator, maintainer, ruler. Far from being prejudiced against this process of formation of gods, I did my best many years ago to collect a set of examples of such generalisation.[1] Thus among the American Indians, each kind of animals was believed to have an Elder Brother, as it were the principle and origin of all the individuals, and so marvellously great and powerful, that as the missionary who mentions them declares, the elder brother of the beaver is as big as our cabin. Again, in Slavonic folklore, we hear of the snake older than all snakes, and the raven elder brother of all ravens, etc. These with others, such as the Peruvian star-archetypes of tigers, sheep, etc., I classed under the heading of "species-deities." Mr. Frazer naturally seeks support for the theory of totem-gods in these cases, and to the two which appear in his manual he adds a statement from Falkner's *Description of Patagonia*, written in the last century, which it is best to set down here more fully. The Jesuit missionary mentions the deities living in subterranean caverns, each of whom presides over one particular cast or family of which he is supposed to have been the creator. Some make themselves of the cast of the tiger, some of the lion, some of the guanaco, and others of the ostrich, etc. When an Indian dies, his soul goes to live with the deity who presides over his particular family. They believe that their good deities made

[1] Tylor, *Primitive Culture*, 1871, vol ii, p. 242.

the world, that they first created the Indians in their caves, and when the beasts, birds, and lesser animals were created, those of the more nimble kind came immediately out, etc., etc. But taking Father Falkner's account as it stands (and indeed according to Captain Musters, the gods are still there in the caves), it seems in no way to imply that the divine creators of the world, the men, and the animals, were themselves animal-gods. As, however, a species of totem-animals is a class, it is always open to possibility that it may be thought to have a class-deity over it. If such a totem-deity can satisfactorily be traced, let him by all means be acknowledged and receive such spiritual rank as he is entitled to. As yet I have met with no valid instance of such divine development taking place. The nearest approach to such I can offer is among the Haidas of North-West America, who have two phratries or groups of totem-clans, called, from their principal totems, the Raven and the Wolf or Eagle. Also the Haidas tell stories of two great personages, Yēt'l and his rival Kanuk, who figure in legends of creation of the earth, the getting of fire, and the like. Now Yēt'l commonly appeared in the form of a raven, so that the word *yēt'l* is used for any raven. So far there seems an arguable case for the mythic raven-deity, on the supposition of Yēt'l being an expansion of the raven totem. But Professor Boas, after careful examination, does not identify the raven of the legends with the raven of the totem.[1] It is to be added that the other legendary god Kanuk does not appear as a wolf, nor is a wolf called by his name.

What I venture to protest against is the manner in which totems have been placed almost at the foundation of religion. Totemism, taken up as it was as a side-issue out of the history of law, and considered with insufficient reference to the immense framework of early religion, has been exaggerated out of proportion to its real theological magnitude. The importance belonging to totem-animals as friends or enemies of man is insignificant in comparison with that of ghosts or demons, to say nothing of higher deities. The rise and growth of ideas of deity, a branch of knowledge requiring the largest range of information and the greatest care in inference, cannot, I hold, be judged on the basis of a section of theology of secondary importance, namely, animal-worship, much less of a special section of that, namely, the association of a species of animals with a clan of men which results in totemism. A theoretical structure has been raised quite too wide and high for such a foundation.

Some passages may be cited from a recent work of much argumentative ability, the *Introduction to the History of Religion*, by Dr. F. B. Jevons, in order to show the theological results which may be drawn from the totemistic theories here discussed, when accepted as established principles and pressed by too confident logic to further consequences. "The sacrifices offered to Jehovah point back, then, not to polytheism, but to a low form of monotheism, in which each clan that offered sacrifice worshipped but one god, though that god was

[1] F. Boas in *Report of British Association*, 1888–9, *Committee on N. W. Tribes of Canada*; for further details see the previous paper on the "Totem-Post at Fox Warren," p. 133.

conceived in the form of the animal or plant which was sacrificed" (p. 392). "The earliest form of society, the clan, is not only a social community, it is also a religious society; fellow-tribesman and fellow-worshipper are convertible terms, because the members of the clan are united to one another, not only by the bond of kinship, but also by joint communion in the sacramental sacrifice of the totem-god" (p. 391). Dr. Jevons places himself at a disadvantage by basing his argument on particular views which he describes as "the most recent results of anthropology," instead of taking the safer course of working out the evidence for himself. The totem-god whom he sets over "the lowest form of monotheism" is, I have tried to show, a merely hypothetical being. Nor does the evidence offered to trace his sacramental position as at once god and victim find any conclusive proof in the totem-worship of the low-cultured world. The immense influence of sacrificial feasts as means of binding societies of worshippers together, and to their common divinity, is indeed undeniable, and to have pressed it on the public mind is one of the great merits of the late Professor W. R. Smith's teaching.[1] But when it came to his introducing the totem into the doctrine of the slain god, and suggesting with reference to passages in Mr. Frazer's manual, that totem-sacraments are found among rude hunting tribes, he was, I venture to think, no longer on solid ground. That a Californian tribe should for their annual festival have killed in each village one of the sacred turkey-buzzards, taking its feathers for the priest to dress in the character of their god who had appeared to the people in such guise, is a rite which explains itself without supposing that the bird was a totem, or its death an expiatory sacrifice. Nor does there seem a piacular motive in the annual rite among the Zuñi Indians of killing the turtles, their kinsfolk, to go to "our lost others" in the lake of the dead. Indeed Mr. Frazer has since changed his opinion of this ceremonial rite, taking it as a case of transmigration of souls. I need not go into further details, preferring to quote a later remark by Mr. Lang, "But Mr. Frazer and I both admit, and indeed are eager to state publicly, that the evidence for sacrifice of the totem and communion in eating him is very scanty." It may be reasonable to go a step further and suggest that till the totem-sacrament is vouched for by some more real proof, it had better fall out of speculative theology.

While as yet the time has not come to offer so conclusive an explanation of the origin and development of totemism as would clear the whole subject, it will be well to draw attention to its history of late years. McLennan did not commit himself to a definite theory, which was wise considering the scantiness of the evidence. Mr. Herbert Spencer's conjecture as to ancestors named Wolf, Bear, etc., giving descent to clans so called, is merely artificial. Mr. Frazer in his *Totemism* leaves the question open, but in his *Golden Bough* he proposes a theory

[1] W. R. Smith in *Encyc. Brit.*, 1886, art. "Sacrifice"; *Religion of the Semites*, p. 386; J. G. Frazer, *Totemism*, p. 48; *Golden Bough*, vol. ii, p. 94; A. Lang, *Modern Mythology*, 1897.

which is to be found in the writings of Professor G. A. Wilken, as to the notion of the human soul passing into an animal, plant, or other object, and thus causing a sympathetic connexion between the person and the receptacle of his soul. This Wilken[1] exemplifies from folklore by the Hindu tale of Punchkin, whose life was bound up with the life of the little green parrot, which was in the little cage, which was under the six water-jars, and so forth; the Russian tale of Koshchi the deathless, whose death was in an egg, and the egg in a duck; the Malay tale of Bidasari, whose soul was in a fish, etc. Thence we pass to the practice of sorcerers in the Malay archipelago of depositing the souls of people for security outside them at dangerous times, as when the soul of a woman in childbirth is transferred to an iron cleaver in charge of the sorcerer. In this way Wilken accounts for the Mexican idea of the animal assigned to a child as its *nagual* or tutelary genius, there being henceforth sympathy between the two, so that the death of the one involves the death of the other. So he explains the sympathetic tree on which the life of a person or family depends, as so often is related in European folklore. This evidence and argument provide Mr. Frazer with a theory of the origin of totems. He argues that the man's relation to the totem is derived from his soul (or one of his souls) residing for security in one of the totem-creatures, whence his worship of them and his objection to killing and eating them, and their reciprocal kindness to and protection of him, and the general conception that the man and his totem guardian are kinsfolk by descent. It will be seen that this theory goes part of the way toward accounting for the peculiar qualities of totems. But there are also objections to it which seem, to me at least, insuperable. One is that if tribes living under the totem-system really thought their souls were in the totem-animals, we should have heard of it long before this, whereas there does not appear to be a single mention of such an idea. Also the rule that an exogamous savage under the maternal system abstains from killing or eating his totem-animal for fear of losing his life, while his wife and children, being of a different totem, put him daily in such danger by devouring it, seems a hopeless inconsistency. I will not, however, pursue this line of criticism, being more anxious to call attention to Wilken's own view of the origin of totems, which, if it does not completely solve the totem-problem, at any rate seems to mark out its main lines.

This eminent anthropologist has collected in his *Animism among the Peoples of the Malay Archipelago*,[2] accounts of the native animal-worship prevailing in that region, one of those where it is still possible to study the state of mind of peoples who frankly recognise in certain animals their spiritual equals and indeed, superiors; beings whose bodies not only have limbs and organs corresponding to their own, but who have, as it were, human thought and speech, and may excel man not merely in strength but in wisdom. The crocodile is especially venerated; he is Tuwan-besar,

[1] G. A. Wilken, *De Simsonsage; De Betrekking tusschen Menschen-Dieren-en Plantenleven;* in *Indische Gids*, 1884, 1888: *Ueber das Haaropfer, etc.*, in Revue Coloniale Internationale, 1886–7.

[2] G. A. Wilken, *Het Animisme bij de Volken van den Indischen Archipel.*, 1884–5, part I., pp. 74–5.

Great Lord, and regarded as equal in rank to the Dutch Resident. Crocodiles are kindly and protective beings, to kill whom is murder, indeed they may be man's near relatives; offerings are made to them, and people look forward to the great blessedness of becoming crocodiles when they die. So it is with tigers, whom the Sumatrans worship and call ancestors (*nenek*), whom their countrymen will not catch or wound but in self-defence, so that when one has been trapped they try to persuade him that it was not their doing. Wilken sees in this transmigration of souls the link which connects totemism with ancestor-worship, and on considering his suggestion, we may see how much weight is to be given to the remarks made independently by Dr. Codrington[1] as to Melanesia. He found that the people in Ulawa would not eat or plant bananas, because an influential man had prohibited the eating of the banana after his death because he would be in it; the elder natives would say, we cannot eat so-and-so, and after a few years they would have said, we cannot eat our ancestor. In Malanta, a man will often say he will be in a shark. Dr. Codrington has lately sent me a note from Mr. Sleigh, of Lifu, who writes: "When a father was about to die, surrounded by members of his family, he might say what animal he will be, say a butterfly or some kind of bird. That creature would be sacred to his family, who would not injure or kill it; on seeing or falling in with such an object the person would say, 'That is *kaka* (papa),' and would, if possible, offer him a young cocoa-nut. But they did not adopt thus the name of a tribe." As to such details, we may, I think, accept the cautious remark of Dr. Codrington, that in the Solomon Islands there are indeed no totems, but what throws light on them elsewhere. The difficulty in understanding the relation of a clan of men to a species of animals or plants is met by the transmigration of souls, which bridges over the gap between the two, so that the men and the animals become united by kinship and mutual alliance; an ancestor having lineal descendants among men and sharks, or men and owls, is thus the founder of a totem-family, which mere increase may convert into a totem-clan, already provided with its animal name. By thus finding in the world-wide doctrine of soul-transference an actual cause producing the two collateral lines of man and beast which constitute the necessary framework of totemism, we seem to reach at least something analogous to its real cause. But considering the variations found even between neighbouring tribes in the working of their ideas, it would be incautious to lay down as yet a hard and fast scheme of their origin and development. As an example of this may be taken the remarkable new information by Professor Baldwin Spencer,[2] of Melbourne, as to the totem-system of the Arunta tribe, contained in papers communicated to the Royal Society of Victoria in anticipation of his forthcoming work on the *Tribes of Central Australia*. The exogamous arrangements of the Aruntas, as is common in the country, depend on classes or phratries, descent being on the father's side. Individuals are classed by totem-names, Hawk, Witchetty Grub, Emu, Kanguru, Grass Seed, etc., though these do not

[1] R. H. Codrington, *The Melanesians*, pp. 32–3.

[2] W. B. Spencer in *Proc. Roy. Soc. Victoria*, vol. x, N.S., 1897–8.

regulate the marriages. The explorers were much perplexed to find that such totem-names of the children did not necessarily follow those of either parent; thus of two parents, both Witchetty Grubs, one child might have the same totem and another be a Wild Cat. On inquiry into this apparent confusion, a mythical meaning was disclosed by the natives somewhat as follows: In the old alcheringa or dream times, it was explained there were ancestors who lived and wandered about the land in groups of kangaroo-men and emu-men and the like, of whom one could not say whether they were men, or kangaroos and emus. That these names represented totems seems clear from the belief that at first each group belonged to its proper half of the tribe. As these ancestors wandered over the land, some of them went into the ground at certain spots and turned into the sacred churingas or bull-rearers so important in native Australian rites, and thus in the Arunta country there are numerous spots where these wooden humming instruments are buried, each associated with a spirit-ancestor, and carrying his or her totem-name. As the natives now wander about the country, wherever a child is conceived, one of the ancestor-spirits deposited in that place enters into that child, who takes the local totem accordingly, becoming a Bandicoot or a Witchetty Grub, or what not. A more extraordinary animistic scheme was perhaps never known, yet even here the transference of souls between the man-line and the beast-line is evident.

In these remarks it has seemed safest not to pursue analogies, developments, or survivals of totemism into the religions of the old civilised world, Egypt, Babylonia, India. It may be best to postpone such inquiries until savage and barbaric animal-worship has been more strictly classified, and the totem has shrunk to the dimensions it is justly entitled to in the theological schemes of the world. Nor do I propose to enter into detailed discussion of the social results on the strength of which totemism claims a far greater importance in sociology than in religion, connected as it is with the alliance between clans which ensues from the law of exogamy only allowing marriage between different clans, as determined by the clan totems. Exogamy can and does exist without totemism, and for all we know was originally independent of it, but the frequency of their close combination over three-quarters of the earth points to the ancient and powerful action of the totems at once in consolidating clans and allying them together within the larger circle of the tribe. This may well have been among the most effective processes in the early social growth of the human race.

76. Professor Adolf Bastian: Born June 26, 1826; Died February 3, 1905.
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English.	Bayanzi.	Bambala	Bahuana (Bahoni).	
			Lundu.	Luano.
Mouth	mun	gan	*pikop	—
Teeth	madj	mass	men	—
Hand	kekandje	n'dembo	kikansi	kikes
Leg	kul	gul	{ kul (upper half) / mokom (lower half) }	—
Foot	kekanch	kigazu	kikanze	makul
To come	tche	zza	zza	iya
To go	yaya	dagwe	n'da	kwe
To eat	biedya	kulya	dia	yakledja
To drink	kunya	kunya	n'nua	noadya
Hunger	n'djal	n'dzala	n'dzala	—
To hit	kubul	kubula	kubet	kutscha
To kill	kukwa	gufoa	fa	kupfa
To break	kobol	kobogole	kobogol	—
To see	kommon	gutala	kumon	—
Woman	mokan	mokosuni	baket	mokat
To work	kikiri	kusal	kussal	assal
To wash	makawob	gof	kukwal	eul
To speak	kubal	kohossa	kufun	amo
White	m'pio	pemb	pez	mpes
Black	wapiii	ubumbele	kuhit	bondun
Pretty	kobong	pim	pim	m'pipi
Finger	kekange	dembu	milem	molim
True	kibiri	kikiri	kwakirik	n'djim
Shadow	—	—	kizwiz	—
I	men	—	n in	— —
Thou	n'ji	—	n'ge	—
He	n'gi	—	yan	—
We	bin	—	ben	—
You	bin	—	bet	—
They	n'gi	—	yan	—

* This is the general term ; pikop-monwa = the whole mouth ; pikop = the under lip ; moniva = the tongue.

E. TORDAY.

Obituary : Adolf Bastian.

Tylor.

Professor Adolf Bastian: born June 26, 1826; died February 3, 1905. 76

I had intended to write for the Anthropological Institute a short account of the life and works of my honoured friend, Professor Bastian, of Berlin, who died last February at Port of Spain. But illness intervened which made it impossible for me to carry out this intention. In the meantime a fellow anthropologist, like myself a student of Bastian's voluminous writings, placed in my hands a summary account of what he had drawn up of the great anthropologist's travels and of his published writings, which, I may remark, occupy between two and three feet on my bookshelves, and run toward 10,000 pages, not counting his articles in the *Zeitschrift für Ethnologie*. Students

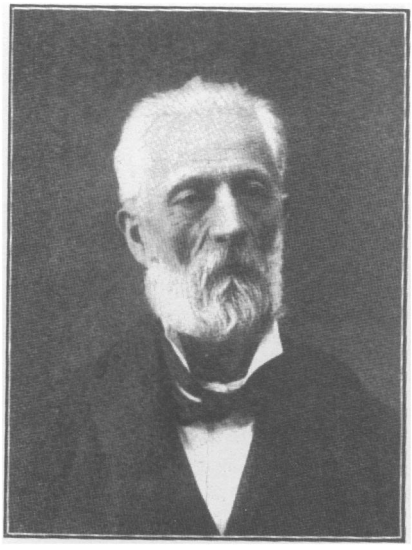
engaged in serious anthropological work, especially on the culture side, will find much to profit by in Bastian's volumes, and in the not easy task of consulting them will be helped by my friend's account which is here reproduced. The want of references is, of course, a serious drawback, but my own experience is that Bastian's statements are apt to be confirmed by further enquiry.

Fortunately I possess a photograph of Bastian, which shows him somewhat earlier in life than the picture in the *Zeitschrift*. From this photograph the present engraving is taken.

EDWARD B. TYLOR.

NOTES ON THE LIFE AND WRITINGS OF BASTIAN.

Adolf Bastian was born in Bremen on June 26th, 1826. His father belonged to a well-known merchant family, and to him probably is due the strong business instinct and the gift of organisation which characterised his son as well as the opportunities for acquaintance with visitors from the ends of the earth, and later on the impulse to travel and the first facilities for it. Young Bastian's education was wide and thorough. He passed through no less than five universities, studying law at Heidelberg and biological subjects at Berlin, at Jena, and then at Wurzburg, where Rudolf Virchow had just begun to lecture, taking finally a doctor's degree in medicine at Prague in 1850. In the next year he began his active life. He took a post as ship's doctor for a voyage to Australia, and thus inaugurated a series of voyages of research which covered in all some five and twenty years and ended only with his death. His journeys brought him into almost every region of the habitable world, and though carried out with the minimum of outward preparation they were all conceived with a single definite object in view—the collection of materials for a comparative psychology, on the principles of a natural science.



His first journey lasted eight years, from 1851-9, and led him first to Australia and the Pacific; then to Peru, Mexico, and the West Indies; then back to China, Malaysia, and India, and then by way of West Africa homeward. Only a fragment of his experiences on this journey was ever formally published, namely, *Ein Besuch in San Salvador* (the little-known capital of the negro kingdom of the Congo), and even here the record of actual travel was subordinate in his mind to the illustration of his general view, for the book bears the sub-title *Ein Beitrag zur Mythologie und Psychologie*. In the next year, however, appeared his principal essay, *Der Mensch in der Geschichte; zur Begründung einer Psychologischen Weltanschauung* (Leipzig, 1860), in three substantial volumes, entitled respectively, *I. Die Psychologie als Naturwissenschaft; II. Psychologie und Mythologie; III. Politische Psychologie;* all full of original observations of many peoples, and of the fruits of a reading which was already incredibly wide.

In 1861 he was in Indo-China again, on a four years' journey which covered Malaysia, the Philippines, and Japan, and brought him home by North China, Central Asia, and the Caucasus, laden with the materials for six massive volumes, *Die Völker des Östlichen Asiens*, which dealt more particularly with Buddhism, and with the cultures of Burma and Siam, and were not completely published till 1868.

There follows here an interval of eight years, 1865 to 1873, during which Bastian's energies were mainly directed to the organisation of Ethnological studies in Germany.

Soon after his return he was appointed to an assistant-directorship in the Royal Museums at Berlin, where he found the Ethnological collections confined to two galleries and a very inadequate work-room, but his enormous powers of work and his genius for amassing material and recruiting assistance soon made a change, and the eventual transference of the whole department to an independent *Museum für Völkerkunde* in 1886 was literally Bastian's achievement.

Meantime, though engaged in constant literary work, explaining and defending his psychological theories in detail, he found time for much solid assistance to the Berlin Geographical Society, of which he became, eventually, President from 1871 to 1873. And the second of his great services to Ethnology arise directly out of this phase of his activity.

The first suggestion of an Ethnological Society in Berlin had come from the geographer, Karl Ritter, and in Paris and London such organisations had already been started in 1859 and 1843 respectively, but it was not till 1868 that any practical step was taken in Germany. The first suggestion was merely for an Ethnological department of the Berlin Geographical Society, but Bastian stood out for an independent organisation, and his foresight was soon justified. Virchow, on the anatomical side, lent him his powerful support; the archæologists felt no less the need of a centre for the new prehistoric studies, and the threefold coalition took shape in the *Gessellschaft für Anthropologie, Ethnologie und Urgeschichte*, which was formally inaugurated on 17th November 1869, with Virchow at its head, and Bastian and Braun as his vice-presidents.

To 1868 also belongs the foundation of the world-famed *Zeitschrift für Ethnologie*, which was started and edited as a private venture by Bastian and R. Hartmann nearly two years before; by Bastian's influence it became the regular organ of the Anthropological Society. The full title of its original issue expresses well the motives of Bastian's work at this time, it runs thus:—*Zeitschrift für Ethnologie und ihre Hilfswissenschaften, als Lehre vom Menschen in seinen Beziehungen zur Natur und Geschichte.*

His presidency of the Berlin Geographical Society 1871–3 was chiefly marked by his establishment of the German African Society, and by the organisation of the Loango expedition of 1873, the object of which was to carry further Bastian's preliminary reconnaissance at San Salvador, and to effect an entry into the Dark Continent by way of the west coast, which had hitherto been almost wholly avoided by European explorers. The Loango expedition itself was a failure; the means collected were inadequate, and the local difficulties were peculiar and insurmountable; and it was not till 1877 that the penetration of Africa was accomplished, and then it was by Stanley, and from a base on the East coast.

But Bastian was not in the strict sense a geographer. Neither the difficulties nor the results of travel as such had had the smallest interest for him; and it was difficult to make him speak of his adventures; he published practically no description of the countries which he traversed, any more than of the individuals whom he met there; he concerned himself with none of the problems of structure, configuration, or climate, or of the distribution of living forms, which confront the ordinary explorer. Yet his wide and true perspective of the geographical conditions, and his enormous experience of remote and unfrequented lands, made him an invaluable ally of the German geographical school; and his doctrine of "Geographical Provinces," though not wholly his own, had considerable influence in the development of recent opinion on the matter.

Bastian took no official part in the Loango expedition; but he went out with it, and received its collections in the Museum of Ethnology, of which he was by this time director. And his fourth journey, in 1875–6, was planned, like all its successors, with the direct object of increasing the collections of this museum, as well as of furnishing

material for further books on the "customs and beliefs of distant peoples." The fourth journey took him to the West Indies, and to South and Central America, and its main results were published in 1878 under the title *Die Kultur Länder der alten Amerika*; and the fifth (1878–80) traversed Southern Asia from Persia to Assam and Indo-China, and led on once more to Malaysia, Australia, New Zealand, and across the Pacific again to California and Yucatan. Its principal outcome was a vast work on the *Religious Myths of the Polynesians*, which appeared in 1881.

Then, for some eight years, administrative work in connection with the new *Museum für Völkerkunde* occupied most of his time; but the museum was formally opened in December 1886, and in a year or two more he was free to go off again, this time (1889–91) through Turkestan to India and East Africa, with special enquiry into Jainism and Buddhism; and so again in 1896–8 to look for early Hindu remains in Java, and as far east as Bali; and again to Ceylon, for further Buddhist study, in 1901–3. Finally in 1903, at the age of seventy-seven, he set out once more, first to his beloved Malaysia, then on to study the earlier history of Jamaica, in caves and shell-mounds, and so to Trinidad and Venezuela, till he died, almost unattended, after a brief illness, at Port of Spain in Trinidad, on February 3, of the present year. For him it seemed, as to that older voyager of Bremen, *Navigare necesse est; vivere non necesse est.*

Bastian's service to anthropology was, in brief, two-fold. His world-wide travels, and his incessant activity as a collector, have their monument in the vast treasures of the great museum which he created, and his great ability as an organiser, in the well-planned building which they fill. But his work in the field—immense as were the results—attained this extent in space only at the expense—not indeed of thoroughness within his self-imposed limitations—but of width and proportion of interest. The geographical environment, and the physical characteristics of the peoples whom he had been observing are usually simply passed over; and even in those departments of descriptive ethnography on which his attention was concentrated, the peculiar standpoint from which he viewed his own studies, the extraordinary rapidity with which he was wont to throw his material into shape for publication, and his habit of piling together original and borrowed information with only the slightest indication of the sources in each case, made his writings peculiarly difficult to use, and in later years almost unreadable.

Nor was he strictly an ethnographer. He had neither the width of interest, nor the orderliness of mind which carries out a detailed exploration within fixed limits, or classifies and arranges a collection of ethnographical material. He had no care for technology or even for art—which is more surprising—except in so far as its manifestations expressed racial or national character; and even in the phases of thought, which would seem most akin to his special interest, there is a stern intolerance of sentiment and of all the softer side of life, which makes all the more wonderful his real gift of entering into the thoughts and feelings of simple undisciplined minds. But he had the clearest conception of what he wanted in the way of materials, unending perseverance in collecting it, and a strong sense of the imperative need for collecting it now before the march of European culture extinguished it at its source; and he had a peculiar personal gift of inspiring workers and collaborators, of enticing private collections within the walls of his museum, and of finding out in each locality the people who knew and of eliciting from them their information. And this latter gift most happily was not limited to his intercourse with Europeans: a large part of his book on Polynesian mythology came to him straight from the lips of the natives themselves, and the groundwork of his *Peoples of Eastern Asia* was the lessons in Buddhism which he received from a native priest during an involuntary detention in Mandalay.

Bastian's other contribution to anthropology is in the domain of ideas. The conception of a *Völkerpsychologie*—of a science, that is, which studies the phenomena of the

corporate social life of peoples, as ordinary psychology studies the mental phenomena of individuals, and has, of course, its place far back in the philosophy of the Greek world, and in modern times had been reformulated for example by Herbart as early as 1815. More than this, Theodor Waitz, though only five years senior to Bastian, had already published his preliminary *Lehrbuch der Psychologie als Naturwissenschaft* in 1849, a year before Bastian took his doctor's degree at Prague. That Bastian was directly indebted to Waitz for his conception of anthropological psychology is not easily proved, but the ideas of Waitz and his school were "in the air" at the moment of Bastian's first departure from Europe; they were copiously discussed in Germany during the years of his first journey, and on his return in 1859 he would find the first volume of Waitz's *Anthropologie der Natur-völker* on the point of publication, and Steinthal and Lazarus editing the first volume of the *Zeitschrift für Völkerpsychologie und Sprachwissenschaft.*

An introspective and deductive "psychology of the individual," or even its modern inductive and experimental counterpart, explains the mechanism by which experiences are collected and combined; but it does not explain why either the experiences or the conceptions and ideas which supervene are of the kind that we find to be normal among mankind; nor does it take adequate account of the circumstance that man is practically not found in an isolated condition. As Aristotle observed long ago, he is a "social animal," and a large part of his ways of looking at the world, and of his responses to the impressions which the world makes on him are determined not by himself but by the view of the world which is current in the society within which his thinking apparatus has grown up. There is, therefore, need of a study, on a wide, scientific, inductive, comparative method, of the evidence which is offered among all the peoples of the earth as to the connection which exists between such ways of looking at the world, and the institutions and products of social activity which accompany them. These ways of looking at the world—*Welt-anschauungen*, as his contemporaries mostly called them—Bastian was wont to describe as *Völker-gedanken.* They may be high or low in quality, simple or complex, like the *Welt-anschauung* of this or that individual; and their value and complexity, and the nature and direction of their growth, all which will be represented in the character of the culture which they generate will depend upon the interaction of two factors—the physical organisation of the men and the characteristics of their material geographical environment. Obviously the analysis will be easiest where both the minds and the material surroundings are at their simplest and present the fewest opportunities for thought. These cases we shall detect by the simplicity—the primitiveness we call it—of the social structure and outward civilisation which results, and consequently it is among the *Natur-völker*—the "cryptograms of mankind" as Bastian used to call them—that we shall find the best materials for study.

The result of a preliminary survey shows:—First, a surprising uniformity of outlook on the part of all the more primitive peoples; second, a correlation of such differences as appear with observable differences in the material surroundings. It results from this, that we may assume, as a working hypothesis inductively established, the psychic unity of mankind—and this in the early sixties was, of course, still a burning question, scientifically and politically as well—and therefore we may concentrate our attention for the future, not on the "coincidences" between the conceptions of savages but on the discrepancies, for it is the latter and not the former which demand explanation.

It results further, that if the discrepancies correspond with differences of material environment, these will vary (broadly speaking) in accordance with the geographical conditions. And as complete isolation is the exception among human societies, stagnation—due to a final equilibrium between the inward and the outward—is the exception also. Conversely, it is mainly change of geographical conditions, as in the case of a wholesale migration, or contact along the frontier of geographical provinces, which will be the

occasion, or the scene, of contact between distinct *Völker-gedanken;* and when such contact occurs, reaction takes place, and the outlook of the people who experience such clash of ideas is modified accordingly, just as a plant changes its habit of growth when it spreads into a fresh climate. And such change and growth accordingly goes on and on till the influence of purely geographical conditions is reduced to quite negligible dimensions.

The corner stones, therefore, of Bastian's ethnology are two. The first of these is the *Völkergedanken*, which he first expounds in his greatest theoretical treatise, *Der Mensch in der Geschichte* (1860), and defends in detail in his *Beiträge zur vergleichenden Psychologie: die Seele und ihre Erscheinungswesen in der Ethnographie* (1868), in *Das Beständige in der Menschenrassen, und die Spielweite ihrer Veränderlichkeit*, in the same year, and more popularly, later, for example in *Der Völkergedanke im Aufbau einer Wissenschaft vom Menschen* (1881), and in *Wie das Volk denkt* (1892). The second is the doctrine of geographical provinces, which is implicit in *Der Mensch in der Geschichte*, and is separately treated in *Zur Lehre von den Geographischen Provinzen* in 1886.

Neither doctrine, of course, was originally or exclusively Bastian's. Alexander von Humboldt, who died before Bastian's book appeared in 1860, and Karl Ritter, the beginning of whose activity falls, like that of Waitz, during the period of Bastian's first voyage, had done much to co-ordinate the results of geographical exploration and to formulate the German view of geography as a science of the co-relation of distributions. Waitz had emphasised no less clearly in 1859 the duty of anthropology to study man as a social animal; and in the prefatory essay in the first volume of the *Zeitschrift für Völkerpsychologie* the position is clearly formulated that the form which social life has taken among mankind is, in fact, its separation into peoples; and the development of the human race is bound up with the diversity of peoples; that the *Völkerpsychologie* which is in question is therefore a comprehensive history of culture, "*ideeler Stils*," and that "peoples are to be regarded as organisms," and it is in and with regard to these and their customs and laws, that "the specific peculiarities are to be studied which "give them their characteristic impress." And when it came to be a question in 1863 of translating some standard work of the German school of ethnology for the use of British students, it was again the first volume of Waitz, and not any work of Bastian's, which was selected for the purpose by the Anthropological Society.

A literary output so voluminous as Bastian's demands almost a bibliography of its own, and down to 1896 this is supplied by the practically complete list in the *International Archiv für Ethnologie* of that year. The titles of the substantive books in it extend over more than two large printed pages, and the list of shorter essays, articles, and reviews covers fourteen more. Appreciative summaries of Bastian's career and of his services to ethnology have appeared in the *Zeitschrift für Ethnologie* on the occasion of his sixtieth and seventieth birthdays, and of his lamented death (*Z. f. Ethn.* 1886, p. 256; 1896, p. 386; 1905, p. 233), and should be supplemented by the biography by Dr. Achelis in the Virchow-Holtzendorff series (1891), and from the same author's *Die Entwickelung der Modernen Ethnologie* (1889).

REVIEWS.

Archæology: Method. **Rathgen: Auden.**

The Preservation of Antiquities. Translated from the German of Dr. F. Rathgen by Drs. G. A. and H. A. Auden. Cambridge: At the University Press, 1905. Pp. xiv + 176. **77**

In this version of Dr. Rathgen's manual we possess a work of a type hitherto unrepresented in English literature. In the first third of the little volume the causes of the deterioration of antique objects wrought in certain materials are discussed from